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The Record comprises:

The Report of the President to the Board of Control, the Catalog, the Bulletin of the Summer Session, the Schedule of Courses for each term or semester, the University Directory, and various bulletins on regulations and policies.

These bulletins will be sent gratuitously to all persons who apply for them. The applicant should specifically state which bulletins or what information is desired. Address.

THE REGISTRAR, University of Florida

Gainesville, Florida

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UNIVERSITY CALENDAR

1957-1958

REGULAR SESSION SEPTEMBER 1957 — JUNE 1958

1957

August 17, Saturday.....Last day for filing preliminary applications for first semester.

Sept. 16, 17, Mon., Tues.....Placement Tests for entering students.

Sept. 16-21, Mon.-Sat.....Orientation and registration according to appointments assigned on receipt of preliminary application. No one permitted to start registration on Saturday, September 21, after 10 a.m.

Sept. 23, Monday, 7:40 a. m.....Classes begin. All registration fees increased $5.00 for persons completing registration on or after this date.

Sept. 23, Monday, 10:40 a. m.....Scholarship Convocation.

Sept. 28, Saturday, 12 Noon.....Last time for completing registration for first semester. No one permitted to start registration after 10 a.m. on this date. Last time for adding courses and for changing sections.

October 18, 19, Friday, Saturday.....Homecoming. Classes suspended at 12:30 p.m. Friday.

October 28, Monday, 12 Noon.....Last time for making application at the Office of the Registrar for degree to be conferred at end of first semester.

November 4, Monday, 4 p.m.....Last time for dropping courses without receiving grade of E.

November 9, Saturday.....Georgia-Florida football game in Jacksonville. Classes suspended.

November 27, Wed., 6:30 p. m.....Thanksgiving recess begins.

December 2, Mon., 7:40 a.m.....Thanksgiving recess ends.

December 9, Monday, 5:00 p.m.....Last time for removing grades of I or X received in preceding semester or term of attendance.

December 20, Friday, 5:30 p.m.....Christmas recess begins.

December 21, Saturday.....Last day for filing preliminary applications for second semester.

1958

January 6, Monday, 7:40 a.m.....Christmas recess ends.

January 10, Friday.....Last day for candidates for degrees to be conferred at end of first semester to complete correspondence courses.

January 13, Monday, 4 p.m.....Last time for candidates for Master's and Doctor's degrees to be conferred at end of first semester to file theses with the Dean of the Graduate School.

January 18, Sat., 2:30 p.m.....Final Examination period begins.

January 30, Thursday, 4 p.m.....Grades for all candidates for degrees to be conferred at end of first semester due in the Office of the Registrar (special lists are sent to the faculty for this report.)

January 31, Friday.....Faculty meetings, at times announced by the Deans, to pass upon candidates for degrees.
February 1, Sat., 5 p.m.....First Semester ends.
February 1, Sat., 8 p.m.....First semester Commencement Convocation.
February 3, Mon., 4 p.m.....All grades for first semester due in the Office of the Registrar.

SECOND SEMESTER

February 5, Wednesday.....Placement Tests for entering students.
February 7, 8, Fri., Sat.....Registration according to appointments assigned on receipt of preliminary application. No one permitted to start registration on Saturday, February 8, after 10 a.m.
February 10, Mon., 7:40 a.m.....Classes begin. All registration fees increased $5.00 for persons completing registration on or after this date.
February 15, Sat., 12 Noon.....Last time for completing registration for the second semester. No one permitted to start registration after 10 a.m. on this date.
Last time for adding courses and for changing sections.
March 17, Monday, 12 Noon.....Last time for making application at the Office of the Registrar for a degree to be conferred at the end of the second semester.
March 24, Monday, 4 p. m.....Last time for dropping courses without receiving a grade of E.
April 3, Thursday, 6:30 p. m.....Spring recess begins.
April 8, Tuesday, 7:40 a.m.....Spring recess ends.
April 21, Monday, 12 Noon.....Last time for removing grades of I or X received in preceding semester or term of attendance.
May 16, Friday.....Last day for candidates for degrees to be conferred at the end of the second semester to complete correspondence courses.
May 17, Saturday.....Last day for filing preliminary application for 1958 summer session.
May 19, Monday, 4 p.m.....Last time for candidates for Master's and Doctor's degrees to be conferred at the end of second semester to file theses with the Dean of the Graduate School.
May 24, Saturday, 2:30 p.m.....Final Examination period begins.
June 5, Thursday, 4 p.m.....Grades for all candidates for degrees to be conferred at the end of the second semester due in the Office of the Registrar (special lists are sent to the faculty for this report.)
June 6, Friday.....Faculty meetings, at time announced by the Deans, to pass upon candidates for degrees.
June 8, Sunday.....Baccalaureate Service.
June 9, Monday.....Commencement Convocation.
June 9, Monday, 4 p.m.....All grades for second semester due in the Office of the Registrar.

SUMMER SESSION 1958

June 12, Thursday.....Placement Tests for entering students.

June 13, 14, 16, Friday, Saturday, Monday.....Registration according to appointments assigned on receipt of preliminary application.

June 17, Tuesday, 7 a.m.....Classes begin. All registration fees increased $5.00 for persons completing registration on or after this date.

June 18, Wednesday, 5 p.m.....Last time for completing registration for the summer session. No one will be permitted to start registration after 3 p.m. on this date.
Last time for adding courses or changing sections.

June 21, Saturday, 12 Noon.....Last time for making application at the Office of the Registrar for degree to be conferred at the end of the summer session.

July 4, Friday.....Holiday. Classes suspended.

July 7, Monday, 4 p.m.....Last time for dropping courses without receiving a grade of E.

July 18, Friday.....Last day for candidates for degrees to be conferred at end of the summer session to complete correspondence courses.

July 21, Monday, 4 p.m.....Last time for candidates for Master's and Doctor's degrees to be conferred at the end of the summer session to file theses with the Dean of the Graduate School.

August 5, Tuesday, 7 a.m.....Final examination period begins. First semester registration begins for students enrolled in the summer session.

August 7, Thursday, 4 p.m.....Grades for all candidates for degrees to be conferred at the end of the summer session are due in the Office of the Registrar.

August 8, Friday.....Faculty meetings, at times announced by the Deans, to pass upon candidates for degrees.

August 9, Saturday, 12 Noon.....All grades for the summer session due in the Office of the Registrar.

August 9, Saturday, 8 p.m.....Summer Commencement Convocation.

FLORIDA STATE BOARD OF EDUCATION

LeRoy Collins ..... Governor
R. A. Gray ..... Secretary of State
J. Edwin Larson ..... State Treasurer
Richard Ervin ..... Attorney General
Thomas D. Bailey, *Secretary* ..... State Superintendent of Public Instruction

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Ralph L. Miller, *Chairman* ..... Citrus Grower
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Jacksonville, Florida

Fred H. Kent ..... Attorney at Law
Jacksonville, Florida

James J. Love ..... Agriculturalist
Quincy, Florida

Hollis Rinehart ..... Attorney at Law
Miami, Florida

J. Broward Culpepper ..... *Executive Director*
Tallahassee, Florida

ACADEMIC AND ADMINISTRATIVE COUNCILS OF THE UNIVERSITY

J. Wayne Reitz, Ph.D., LL.D.....President of the University
John Stuart Allen, Ph.D.....Vice President of the University
Turpin Chambers Bannister, Ph.D., D.F.A.....Dean of the College of Architecture and Fine Arts
Robert Colder Beaty, M.A.....Dean of Students
Joseph Riley Beckenbach, Ph.D.....Director of the Agricultural Experiment Station
Alvah Alden Beecher, M.M.....Director of the Division of Fine Arts
Marna Venable Brady, Ed.D.....Dean of Women
Marvin Adel Brooker, Ph.D.....Dean of the College of Agriculture
Harley Willard Chandler, M.S.....Vice President for Academic Affairs
Henry Anderson Fenn, LL.B.....Dean of the College of Law
Willard Merwin Fifield, M.S.....Provost for Agriculture
Perry Albert Foote, Ph.D.....Dean of the College of Pharmacy
Linton E. Grinter, Ph.D.....Dean of the Graduate School and Director of Research
Arnold Brams Grobman, Ph.D.....Director of the Florida State Museum
Lewis Francis Haines, Ph.D.....Director of the University Press
Lester Leonard Hale, Ph.D.....Dean of Men
George Thomas Harrell, M.D.....Dean of the College of Medicine
Donald John Hart, Ph.D.....Dean of the College of Business Administration
Leland Wilbur Hiatt.....Director of Alumni Affairs
Richard Sadler Johnson, B.S.P.....Registrar
William Ellis Jones, B.S.B.A.....Business Manager
Clemens Marcus Kaufman, Ph.D.....Director of the School of Forestry
Marvin Arnold Kreidberg, B.S.B.A., Colonel, Infantry.....Professor of Military Science and Tactics
Winston Woodard Little, M.A.....Dean of the University College
Darrel Jay Mase, Ph.D.....Coordinator of the Florida Center of Clinical Services
Ralph Emerson Page, Ph.D.....Dean of the College of Arts and Sciences
Russell Spurgeon Poor, Ph.D.....Provost for Health Center
Ralph Rhudy, Colonel, Air Force.....Professor of Air Science and Coordinator of Military Departments
Bert Clair Riley, B.S.A.....Dean of the General Extension Division
Dorothy Mary Smith, M.Ed.....Dean of the College of Nursing
Dennis Keith Stanley, M.A.E.....Dean of the College of Physical Education and Health
Marshall Owen Watkins, D.P.A.....Director of the Agricultural Extension Service
Joseph Weil, M.S.....Dean of the College of Engineering and Director of the Engineering and Industrial Experiment Station
Rae O. Weimer.....Director of the School of Journalism and Communications
Stanley LeRoy West, LL.B., B.S. in L.S.....Director of the University Libraries
Joseph Benton White, Ph.D.....Dean of the College of Education
A. Curtis Wilgus, Ph.D.....Director of the School of Inter-American Studies
George Robert Woodruff, B.S.E.....Director of Intercollegiate Athletics

OFFICERS OF INSTRUCTION, RESEARCH AND ADMINISTRATION 1956-1957

(The first date indicates the year of current academic employment; the dates in brackets, prior academic employment; the last date, year of present rank.)

ABBEY, WALTER RAYNARD, B.S.M.E., Assistant Professor of Engineering Graphics, and Assistant Research Professor, Engineering and Industrial Experiment Station (1956-1956).

ABBOTT, OUIDA DAVIS, Ph.D. (Missouri), Home Economist, Agricultural Experiment Station (1925-1925).

ABBOTT, THOMAS BENJAMIN, M.A., Clinician, Speech and Hearing Clinic (1955-1955).

ACKERSON, ROBERT HENRY, Ph.D. (Alabama Polytechnic Institute), Assistant Professor of Mathematics (1955-1955).

ADAMS, COURTLAND SMEDLEY, B.E.E., Assistant in Research, Engineering and Industrial Experiment Station (1952-1952).

ADAMS, FRANK THOMPSON, Ed.D. (Florida), Assistant Professor and Head of Business Education, General Extension Division (1946-1947).

ADAMS, PERRY RONALD, M.A.E., Teacher, P. K. Yonge Laboratory School (1953-1953).

AHRENS, MAURICE RUSSELL, Ed.D. (Denver), Professor of Education and Head of Elementary Education (1954-1955).

ALBERTSON, RACHEL, B.A., Editor, Engineering and Industrial Experiment Station (1948-1948).

ALLEGER, DANIEL EUGENE, M.S., Associate Agricultural Economist, Agricultural Experiment Station (1945-1945).

ALLEN, GILBERT M., B.S., Assistant Director of Purchasing (1952-1952).

ALLEN, JOHN STUART, Ph.D. (New York), Vice President of the University (1948-1948).

ALLEN, ROBERT JOHN, Ph.D. (Maryland), Assistant Agronomist, Everglades Experiment Station (1950-1950).

ALLISON, ROBERT VERRILL, Ph.D. (Rutgers), Fiber Technologist, Everglades Experiment Station (1926-1952).

ALMEIDA, JOHN S., M.B.A., Instructor in Accounting (1955-1955).

ALSTON, CLIFFORD, M.S.A., Vegetable Marketing Specialist, Agricultural Extension Service (1956-1956).

ALSUP, GEORGE WROTEN, M.A., Interim Assistant Professor of Art (1955-1955).

AMES, BURTON WEBER, M.A.E., Director of Employee Personnel Services (1923-1948).

AMOR, MANUEL, M.P.H., Instructor in Physical Education (1955-1955).

ANDERS, MARY EDNA, M.A., B.S. in L.S., Assistant Librarian, Reference and Bibliography (1953-1953) (Resigned July 15, 1956).

ANDERSON, CARL ARTHUR, M.B.A., C.P.A., Assistant Professor of Accounting (1947-1950).

ANDERSON, CHRIS WILLIAM, Ph.D. (California), Assistant Plant Pathologist, Agricultural Experiment Station (1950-1950).

ANDERSON, MONTGOMERY DRUMMOND, Ph.D. (Brookings), Professor of Business Statistics and Economics (1927-1927).

ANDERSON, RICHARD JAMES, Ph.D. (Michigan), Professor of Psychology and Associate, Psychological Clinic (1946 [43-44] 1956).

ANDERSON, WILLIAM HART, M.A., Interim Instructor in Accounting (1956-1956).

Andry, Carl Franklin, Ph.D. (Harvard), Associate Professor of Logic (1955-1955).

Ansley, A. E., M.B.A., C.P.A., Assistant Business Manager, Health Center (1956-1956).

Anthony, David S., Ph.D. (Wisconsin), Associate Professor of Chemistry (1955-1955).

Anton, Aaron H., Ph.D. (Yale), Instructor in Pharmacology, College of Medicine (1956-1956).

Apperson, Frances Eugenia, B.A. in L.S., Assistant Librarian and Head of Documents Department (1943-1948).

Aratowsky, Bernard, Ph.D. (Johns Hopkins), Associate Professor of Classical Languages (1950-1955).

Argus, Mary Frances, Ph.D. (Florida), Associate Research Professor, Cancer Research (1952-1956).

Arnett, William Tobias, M.A. Arch., A.I.A., Professor of Architecture; Dean Emeritis, College of Architecture and Allied Arts (1933-1949).

Arnold, Lillian Eleanore, M.S., Associate Botanist, Agricultural Experiment Station (1935-1953).

Arnold, P. T. Dix, M.S.A., Associate Professor of Dairy Husbandry and Associate Dairy Husbandman, Agricultural Experiment Station (1931-1952).

Arrington, Lewis Roberts, Ph.D. (Florida), Assistant Professor of Animal Nutrition and Assistant Animal Nutritionist, Agricultural Experiment Station (1952 [46-50] 1946).

Ashby, Clifford, M.A., Instructor in Speech (1954-1954).

Atchley, Mell H., M.A., Assistant Professor of Sociology (1947-1947).

Atkins, Cedric Donald, B.S., Collaborator, Citrus Experiment Station (1951-1951).

Attaway, Herbert Bailey, M.S.F., Superintendent, State Forest Ranger School and Assistant Professor of Forestry (1954-1954).

Auffenberg, Walter A., Ph.D. (Florida), Assistant Professor of Biological Sciences (1956-1956).

Awtrey, Robert Adair, M.A., Interim Instructor in Mathematics (1954-1954).

Babb, Evelyn M., M.Ed., Instructor in Education (1952-1953).

Bachman, Harold Burton, B.S., Professor of Music and Director of Bands (1948-1949).

Bader, Robert Smith, Ph.D. (Chicago), Assistant Professor of Biological Sciences (1952-1955) (Resigned September 11, 1956).

Baggett, David Amon, B.S., Interim Instructor in Ornamental Horticulture (1956-1956).

Bailey, James William, M.A., Assistant in Administration, Office of the Vice President for Academic Affairs (1953-1953).

Bailey, Thomas Lee, Ph.D. (Chicago), Assistant Professor of Electrical Engineering and Assistant Research Professor, Engineering and Industrial Experiment Station (1953-1954).

Baker, Aaron Sidney, Ph.D. (Michigan State), Assistant Soils Chemist, North Florida Experiment Station (1955-1955).

Baker, Frank Sloan, B.S.A., Assistant Animal Husbandman, North Florida Experiment Station (1945-1945).

Baker, Melvin Charles, Ed.D. (Illinois), Professor of Education (1952-1956).

Bannister, Turpin Chambers, Ph.D. (Harvard), D.F.A. (Honorary), Dean, College of Architecture and Fine Arts (1957-1957).

Baranowski, Richard Matthew, M.S., Interim Assistant Entomologist, Subtropical Experiment Station (1956-1956).

Baringer, William Eldon, Ph.D. (Illinois), Professor of Social Sciences (1947-1949).

Barnes, James Richard, M.A.Arch., Assistant Professor of Architecture (1953-1955) (On leave 1956-1957).

Barnes, Robert Lloyd, M.F., Assistant Professor of Forestry and Forest Research (1951-1955) (On leave 1956-1957).

Barr, William Howard, B.S., Major, Infantry, Assistant Professor of Army Science and Tactics (1956-1956).

Barrett, Albert Michael, Ph.D. (Pennsylvania State), Assistant Professor of Education and Psychology and Associate, Psychological Clinic (1953-1953).

Barrineau, Thomas Lorren, M.A.E., District Supervisor, Agricultural Education (1946-1947).

Barron, Rodger William, B.A., Collaborator, Citrus Experiment Station (1956-1956).

Barrow, Colin Home, M.A., Interim Instructor in Physics (1956-1956).

Barrows, Harold Lindsey, M.S., Chemist, U.S.D.A., Agricultural Experiment Station (1954-1954).

Barrus, Edith Young, B.A., District Home Demonstration Agent, Agricultural Extension Service, Tallahassee (1918-1943).

Bartlett, George Robert, Ph.D. (Chicago), Professor of Philosophy and Head of Department (1947-1953).

Bartley, Ernest R., Ph.D. (California), Professor of Political Science (1949-1955).

Bartley, Rogers Leroy, B.S.E., Administrative Manager, Agricultural Experiment Station and Agricultural Extension Service (1950-1950).

Bashaw, William Howard, M.P.H., Teacher, P. K. Yonge Laboratory School (1954-1954).

Bass, George Lewis, Educational Specialist in Vocational Education (1956-1956).

Bass, Walter Arthur, Ph.D. (Virginia), Instructor in Logic (1954-1954).

Bates, Wilbur Harvey, B.F.S., Instructor in Forestry, State Ranger School (1956-1956).

Baughan, Denver Ewing, Ph.D. (Yale), Associate Professor of English (1946-1946).

Baugher, James Marion, M.Ed., Interim Instructor in Education (1956-1956).

Bault, Roger Quincy, M.A., Assistant Professor of Physical Sciences (1947-1950).

Baumgartner, John Francis, M.A., Interim Instructor in English (1955-1955).

Baxter, John Franklin, Ph.D. (Johns Hopkins), Professor of Chemistry (1952-1952).

Bean, Ruth Wentworth, M.A., Head Resident, Women's Residence Halls (1954-1954).

Beard, Percy Morris, M.S., Associate Professor of Professional Physical Education; Track Coach; General Manager, Division of Intercollegiate Athletics (1936-1949).

Beardsley, Daniel Waldo, M.S., Assistant Animal Husbandman, Everglades Experiment Station (1953 [49-50] 1949) (On leave 1956-1957).

Beaty, Robert Colder, M.A., Dean of Students (1925-1956).

Beaudoin, Allan Roger, Ph.D. (Iowa State), Interim Instructor in Anatomy, College of Medicine (1956-1956).

Beckenbach, Joseph Riley, Ph.D. (Rutgers), Director, Agricultural Experiment Station (1937-1955).

Becker, Charles Henry, Ph.D. (Florida), Professor of Pharmacy (1947-1954).

Becker, Raymond Brown, Ph.D. (Minnesota), Professor of Dairy Husbandry and Dairy Husbandman, Agricultural Experiment Station (1929-1934).

Beckwith, Stephen Lyon, Ph.D. (Michigan), Associate Professor of Wildlife Management (1948-1955).

Beech, Johnstone, M.A., Interim Instructor in Speech (1956-1956).

Beecher, Alvah Alden, M.M., Director, Division of Fine Arts and Professor of Music (1948-1948).

Beirne, Raymond Michael, M.A., Instructor in English (1954-1954).

Beisler, Walter Herman, D.Sc. (Princeton), Professor of Chemical Engineering and Head of Department (1922-1939) (On leave 1956-1957).

Belknap, Sara Yancey, M.A., B.S. in L.S., Assistant in Library, Audio-Visual Services (1953-1953).

Bell, E. N., Superintendent of Maintenance (1943-1946).

Beltz, LeRoy Duane, Ph.D. (Connecticut), Assistant Professor of Pharmacy (1956-1956).

Bennett, John Douglas, M.S.M.E., Assistant in Research, Engineering and Industrial Experiment Station (1956-1956).

Bennett, Robert Broadhurst, Ph.D. (Purdue), Professor of Chemical Engineering and Research Professor, Engineering and Industrial Experiment Station (1953-1953).

Benninger, Lawrence J., Ph.D., (Missouri), Visiting Professor of Accounting (1956-1956).

Bentley, George Robert, Ph.D. (Wisconsin), Professor of Social Sciences and Logic; Counselor (1938-1955).

Benz, William Patrick, M.P.H., Assistant Professor of Physical Education; Clinician, Adapted and Corrective Exercises Clinic (1951-1955).

Berg, Paul Conrad, Ph.D. (Cornell), Assistant Professor of English and Associate, Reading Laboratory and Clinic (1952-1955) (Resigned September 12, 1956).

Bergengren, Roy Frederick, Ed.D. (Florida), Associate Professor of Education and Head of Industrial Arts and Vocational Education (1949-1955).

Berner, Lewis, Ph.D. (Florida), Professor of Biological Sciences (1946-1954).

Bessette, Leo, B.B.A., Chief Examiner, Business Office (1953-1953).

Beth, Loren Peter, Ph.D. (Chicago), Associate Professor of Political Science (1954-1956).

Bevis, Joyce, M.A., District Home Demonstration Agent, Agricultural Extension Service, Tallahassee (1940-1951).

Bezant, Henry R., Artist-Preparator, Florida State Museum (1954-1954).

Bigelow, Gordon Ellsworth, Ph.D. (Johns Hopkins), Assistant Professor of English (1951-1951).

Bingham, N. Eldred, Ph.D. (Columbia), Professor of Education (1950-1950).

Bird, Robert Samuel, B.B.C., Interim Instructor in Building Construction (1956-1956).

Birzis, Lucy, Ph.D. (U.C.L.A.), Instructor in Pharmacology, College of Medicine (1956-1956).

Bitondo, Ted, M.S., Instructor in Physical Education and Assistant Swimming Coach (1951-1951).

Black, Alvin Percy, Ph.D. (Iowa), Research Professor of Chemistry and Sanitary Science (1919-1923).

Black, Kenneth Leroy, LL.B., Professor of Law (1949-1952).

Blackburn, Robert M., Captain, Assistant Professor of Air Science (1955-1955).

Blake, Robert George, Ph.D. (Florida), Associate Professor of Mathematics (1946 [43-44] 1955).

Blalock, Lewis Florence, M.A., Director of Admissions (1930-1935).

Blanton, Franklin S., Ph.D. (Cornell), Professor of Entomology (1956-1956).

Blanton, James Edward, B.E.E., Assistant in Research, Engineering and Industrial Experiment Station (1956-1956).

Bledsoe, Roger William, Ph.D. (Iowa), Associate Director and Agronomist, Agricultural Experiment Station (1947 [43-45] 1955).

Blekking, Earl Henry, B.I.E., Interim Instructor in Industrial Engineering (1956-1956).

Block, Herman Henry, C.E., Associate Professor of Building Construction and Interim Head of Department (1949-1956).

Block, Seymour Stanton, Ph.D. (Pennsylvania State), Associate Research Professor, Engineering and Industrial Experiment Station (1944-1950).

Blodgett, Ralph Hamilton, Ph.D. (Pennsylvania), Professor of Economics (1950-1950).

Blue, William Guard, Ph.D. (Missouri), Associate Biochemist, Agricultural Experiment Station (1950-1956).

Boatright, Clem Aaron, M.M., Instructor in Music (1954-1954).

Boldt, Albert Walter, Ed.D. (Florida), Assistant Dean of Men (1948-1948).

Bolles, Robert Stephen, Ed.D. (Columbia), Professor of Music and Head of Department (1948-1956).

Boone, Lalia Phipps, Ph.D. (Florida), Assistant Professor of English (1950-1952).

Borgia, Agnes Petronella, B.S., Associate Professor of Art (1951-1951).

Bourke, Norman, M.E., Professor of Mechanical Engineering and Research Professor, Engineering and Industrial Experiment Station (1943-1948).

Bovee, Eugene Cleveland, Ph.D. (California), Assistant Professor of Biology (1955-1955).

Bowers, Robert Hood, Ph.D. (Yale), Professor of English (1946-1955).

Boyd, Clifford Allen, Ed.D. (Boston), Professor of Professional Physical Education (1950-1955).

Boyd, Frederick Tilghman, Ph.D. (Wisconsin), Associate Agronomist, Everglades Experiment Station (1952 [38-41] 1952).

Boyd, Maurice, Ph.D. (Michigan), Associate Professor of Humanities (1956-1956).

Boyne, Edwin M., Ph.D. (Michigan State), Interim Professor of Education (1956-1956).

Bradbury, Robert Wesley, Ph.D. (Michigan), Professor of Economics (1950-1952).

Bradshaw, James Philip, M.S. in L.S., Assistant Professor of English (1946-1954).

Brady, Marna Venable, Ed.D. (Columbia), Dean of Women (1948-1948).

Bransford, Thomas Leroy, C.E., Associate Professor of Civil Engineering and Associate Research Professor, Engineering and Industrial Experiment Station (1948-1951) (On leave 1956-1957).

Bratley, Homer Eells, M.S.A., Assistant Entomologist, Agricultural Experiment Station (1932-1932).

Bregger, Thomas, Ph.D. (Cornell), Physiologist, Everglades Experiment Station (1935-1935).

Breland, Herman Leroy, Ph.D. (Illinois), Assistant Soils Chemist, Agricultural Experiment Station (1952-1952).

Brewer, Dickey Thomas, M.S.A., Assistant Soil Surveyor, Agricultural Experiment Station (1955-1955).

Brewster, William, M.A., LL.B., Interim Instructor in Real Estate (1956-1956).

Brey, Wallace Siegfried, Ph.D. (Pennsylvania), Associate Professor of Chemistry and Associate Research Professor (1952-1955).

Briggs, John C., Ph.D. (Stanford), Assistant Professor of Biological Sciences (1954-1956).

Bristol, Loris Rood, M.A., Assistant Professor of Education (1943-1950).

Brodkorb, Pierce, Ph.D. (Michigan), Professor of Biological Sciences (1946-1955).

Brogdon, James Edison, M.Ag., Assistant Entomologist, Agricultural Extension Service (1953-1953).

Brohm, Henry Dore, Ph.B., Professor of Marketing (1949-1950).

Brookbank, John W., Ph.D. (California Institute of Technology), Assistant Professor of Biology (1955-1955).

Brooke, Donald Lloyd, Ph.D. (Illinois), Associate Agricultural Economist, Agricultural Experiment Station (1946-1946).

Brooker, Marvin Adel, Ph.D. (Cornell), Dean, College of Agriculture and Professor of Agricultural Economics (1947 [27-34] 1956).

Brooks, Albert Nelson, Ph.D. (Wisconsin), Plant Pathologist, Strawberry Investigations Laboratory (1926-1932).

Brooks, Harold Kelly, M.A., Assistant Professor of Geology (1956-1956).

Brothers, Shelby Lee, B.S.A., Interim Assistant Agronomist, Agricultural Extension Service (1935-1956).

Brown, Henry Clay, Ph.D. (Florida), Associate Research Professor, Engineering and Industrial Experiment Station and Associate Professor of Chemistry (1952-1956).

Brown, James Cooke, Ph.D. (Minnesota), Assistant Professor of Humanities and Logic (1955-1955).

Brown, William Hansen, B.Arch., Interim Instructor in Architecture (1956-1956).

Brown, Wilson Forest, Ph.D. (Ohio State), Professor of Chemical Engineering and Research Professor, Engineering and Industrial Experiment Station (1950-1950).

Brown, Woodrow Wilson, M.Ag., State Boys' 4-H Club Agent, Agricultural Extension Service (1943-1950).

Browne, Eleanor Bode, Ph.D. (Ohio State), Professor of Education (1948-1948).

Brunet, Joseph, Ph.D. (Stanford), Professor of Classical Languages and Head of Department of Foreign Languages (1927-1950).

Bruun, Jens Peder Moeller, Ph.D. (Denmark), Associate Research Professor, Engineering and Industrial Experiment Station (1954-1954).

Bryant, Fred David, B.A. in L.S., Assistant Librarian in Charge of Health Center Library and Interim Assistant Professor of Library Science (1947-1954).

Bryant, Hazel Mae, B.S., Research Assistant, Cancer Research Laboratory (1954-1954).

Buck, McKenzie William, Ph.D. (Iowa State), Head of Speech and Hearing Clinic and Assistant Professor of Speech (1953-1953).

Buckhannan, Margaret B., R.N., School Nurse, P. K. Yonge Laboratory School (1945-1945).

Bullen, Ripley Pierce, M.E., Curator of Social Sciences, Florida State Museum (1952-1952).

Bunting, Donald Charles, M.S., Assistant Professor of Physical Sciences (1948-1948).

Burdine, Howard William, M.S., Assistant Horticulturist, Everglades Experiment Station (1955-1955).

Burgis, Donald Stafford, M.S.A., Assistant Horticulturist, Gulf Coast Experiment Station (1946-1946).

Burke, Henry Francis, M.D. (Boston), University Physician (1956-1956).

Burt, Evert Oakley, Ph.D. (Ohio State), Assistant Agronomist, Agricultural Experiment Station (1954-1954).

Busby, Joe Neil, B.S.A., Assistant Director, Agricultural Extension Service (1956 [47-52] 1956).

Bussell, William Harrison, M.S.E., Assistant Professor of Mechanical Engineering and Assistant Research Professor, Engineering and Industrial Experiment Station (1948-1952).

Buswell, Arthur M., Ph.D. (Columbia), Research Professor of Chemistry and Sanitary Science (1955-1955).

Butler, George Bergen, Ph.D. (North Carolina), Associate Professor of Chemistry and Associate Research Professor (1946-1951).

Butson, Alton Thomas, Ph.D. (Michigan State), Assistant Professor of Mathematics (1955-1955).

Butson, Keith Darrow, M.S., State Climatologist, U.S.D.A., Agricultural Experiment Station (1956-1956).

Butt, Arnold Frederick, M.Arch., Assistant Architect, Office of the Consulting Architect (1952-1955).

Butterworth, James Donald, Ph.D. (Northwestern), Associate Professor of Marketing (1955-1955).

Byers, Charles Francis, Ph.D. (Michigan), Assistant Dean, College of Arts and Sciences; Professor of Biology; Professor of Biological Sciences and Head of Department (1927-1952).

Byrd, Carl Rufus, Assistant Meteorologist, Weather Forecasting Service, U.S.D.A. (1956-1956) (Resigned October 1, 1956).

Cake, Edwin Wood, Ph.D. (Cornell), Economist in Marketing, Agricultural Extension Service (1952-1952).

Calaway, Wilson Thayer, M.S., Assistant Professor of Civil Engineering and Assistant Research Professor, Engineering and Industrial Experiment Station (1946-1948).

Caldes, George, M.S., Research Assistant, Cancer Research Laboratory (1956-1956) (Resigned August 31, 1956).

Caldwell, Robert Edward, Ph.D. (Purdue), Associate Professor of Soils and Associate Chemist, Agricultural Experiment Station (1941-1956).

Calhoun, Eunice Zipperer, M.A.E., Instructor, P. K. Yonge Laboratory School (1944-1952).

Callaway, Thomas Ralph, B.Des., Interim Instructor in Architecture (1956-1956).

Cameron, Edith McBride, B.J., Associate Professor of Women's Adult Education Activities and Head of Department, General Extension Division (1927-1944).

Camp, Arthur Forrest, Ph.D. (Washington), Vice Director in Charge, Citrus Experiment Station (1923-1936) (Retired December 31, 1956).

Camp, Arthur F., Jr., B.I.E., Research Assistant, Engineering and Industrial Experiment Station (1956-1956).

Cannon, Frances Claire, M.S., Assistant Health Education Specialist, Agricultural Extension Service, Tallahassee (1952-1952).

Capel, George Lafayette, Ph.D. (Florida), Assistant Agricultural Economist, U.S.D.A., Agricultural Experiment Station (1955-1955).

Capretz, Pierre J., Doctorate de L'Universite de Paris, Assistant Professor of French (1949-1954) (Resigned August 13, 1956).

Cara, Mac Dominic, B.S., Assistant Football Coach (1954-1954).

Carey, Joan, Ed.D. (Syracuse), Associate Professor of Education (1952-1952).

Carleton, William Graves, J.D., Professor of Social Sciences and Head of Department (1936 [27-31] 1940).

Carlisle, Victor Walter, M.S.A., Teaching Assistant in Soils (1947-1954).

Carr, Archie Fairly, Ph.D. (Florida), Professor of Biological Sciences (1937-1949).

Carroll, Ralph Elliott, M.S., Assistant Research Professor, Engineering and Industrial Experiment Station (1946-1946).

Carroll, William Richard, Ph.D. (Minnesota), Professor of Bacteriology (1927-1941).

Carson, Marion, B.B.A., Interim Instructor in Accounting (1955-1955).

Carson, Robert Emmett, Ph.D. (Michigan), Professor of Humanities (1946-1946).

Carter, Bonnie Jean, B.S., Home Improvement Specialist, Agricultural Extension Service, Tallahassee (1936-1948).

Carter, Lilly Isabelle, M.S. in L.S., Assistant Librarian and Head of Acquisitions Department (1943-1944).

Carver, William Angus, Ph.D. (Iowa State), Agronomist, Agricultural Experiment Station (1925-1953).

Casey, James Joseph, M.A.Arch., Assistant Professor of Building Construction (1956-1956).

Cason, T. Z., M.D., (Georgia), Director, Department of Medicine of the Graduate School (1943-1943).

Cate, Charles Allen, Ed.D. (Texas), Associate Professor of Education (1953-1953) (On leave 1956-1957).

Cay, Donald Frederick, M.Ed., Interim Instructor in Education (1955-1955).

Chace, James Edward, LL.B., Ph.D. (Chicago), Professor of Real Estate and Head of Department (1930-1946).

Chalmers, David Mark, Ph.D. (Rochester), Instructor in Social Sciences (1955-1955).

Chandler, Harley Willard, M.S., Vice President for Academic Affairs (1923-1954).

Chapman, Herbert Lee, Ph.D. (Iowa State), Assistant Animal Nutritionist, Everglades Experiment Station (1955 [51-53] 1951).

Chapman, Margaret Louise, M.A., B.S. in L.S., Assistant in Library, Reference and Bibliography (1956-1956).

Chapman, Willis Harleston, M.S., Agronomist, North Florida Experiment Station (1942-1953).

Chastain, Barbara, B.S., Research Assistant, Cancer Research Laboratory (1955-1955).

Chen, Wayne Hwa-Wei, Ph.D. (Washington), Associate Professor of Electrical Engineering (1952-1954).

Chenoweth, Horace Avery, M.F.A., Instructor in Journalism and Communications and Art Director, TV Production Center (1956-1956).

Cherry, Henry Spurgeon, M.S., Professor of Physical Education and Head, Department of Intramural Athletics and Recreation (1942-1952).

Chew, Victor, B.S.C., B.A., Interim Assistant Professor of Agronomy and Interim Assistant Research Professor, Statistical Laboratory (1955-1956).

Childers, William Cole, M.A., Interim Instructor in English (1955-1955).

Chipley, Edmund Lee, B.S.Ch.E., Assistant Research Professor, Engineering and Industrial Experiment Station (1952-1952).

Choate, Rush Edgar, M.S.A., Associate Professor of Agricultural Engineering (1947-1954).

Chotas, Nicholas Eli, M.Arch., Associate Professor of Architecture (1949-1955).

Christian, Susan Robinson, M.S., Assistant Nutritionist Farm and Home Development Specialist, Agricultural Extension Service, Tallahassee (1955-1955).

Christian, Wade Wright, M.A., Instructor in Education (1952-1952) (Resigned September 10, 1956).

Christie, Jesse Roy, Ph.D. (George Washington), Nematologist, Department of Entomology, Agricultural Experiment Station (1954-1954).

Clark, Felie Woodrow, M.A., M.S., Assistant in Library (1956-1956).

Clark, Fred, M.S.A., Associate Agronomist, Agricultural Experiment Station (1940-1953).

Clark, Jack Lewis, B.Arch., Assistant Professor of Architecture (1955-1955).

Clark, Reginald Francis, Ph.D. (Florida), Post-doctoral Research Fellow in Chemical Engineering, Engineering and Industrial Experiment Station (1956-1956).

Clark, Vernon Wilmot, LL.B., Professor of Law (1946-1946).

Clark, Washington Augustus, M.A., Associate Professor of English (1931-1956).

Clayton, Harold Gray, M.S.A., Director of the Agricultural Extension Service and County Agent Leader (1917-1947) (Retired May 31, 1956).

Cline, Robert Stuart, Ph.D. (Pennsylvania), Associate Professor of Insurance (1955-1955).

Closson, James Harwood, M.D. (Hahnemann), D.Sc. (Med.) (Pennsylvania), University Physician-Neuropsychiatrist (1952-1952) (Resigned December 31, 1956).

Cochran, Betty Joan, B.S., Program Director, Florida Union (1955-1955).

Cody, Madison Derrell, M.A., Professor of Botany (1919-1927) (Retired June 30, 1956).

Cody, Martha Ballard, M.A., Assistant Professor of Education (1951-1954).

Coe, Donald Melvin, Ph.D. (Washington State), Associate Pathologist, Agricultural Extension Service (1954-1955).

Collier, Richard McCandless, B.A., Assistant in Research, Engineering and Industrial Experiment Station (1956-1956).

Combs, Arthur Wright, Ph.D. (Ohio State), Professor of Education (1954-1954).

Combs, George Ernest, Ph.D. (Iowa State), Assistant Professor of Animal Husbandry and Assistant Animal Husbandman, Agricultural Experiment Station (1955 [51-52] 1955).

Comins, Harrison Durgin, M.S., Assistant Professor of Civil Engineering (1946-1946).

Congleton, James Edmund, Ph.D. (North Carolina), Professor of English (1937-1946).

Conner, Frederick William, Ph.D. (Pennsylvania), Professor of English (1935-1948).

Conover, Robert Armine, Ph.D. (Illinois), Plant Pathologist, Subtropical Experiment Station (1947-1948).

Constans, Henry Philip, LL.B., M.A., Professor of Speech and Head of Department (1929-1937).

Coogle, Esther, M.S., Artist and Assistant in Research, College of Agriculture and College of Arts and Sciences (1946-1950).

Cook, Allyn Austin, Ph.D. (Wisconsin), Assistant Plant Pathologist, Agricultural Experiment Station (1954-1956).

Cooley, Irwin David, B.S.C.E., Interim Instructor in Engineering Mechanics (1956-1956).

Cooper, John Francis, M.S.A., Editor and Head of Editorial Department, Agricultural Experiment Station and Agricultural Extension Service (1925-1954).

Cooper, Lillian, B.A., Assistant Editor, Engineering and Industrial Experiment Station (1954-1954).

Cooper, Nelson Drennen, E.E., Interim Assistant Professor of Electrical Engineering (1954-1954).

Corbett, Merwin Kenneth, Ph.D. (Cornell), Assistant Plant Pathologist, Agricultural Experiment Station (1954-1954).

Cordts, Allen Frederick, Ed.D. (Columbia), Resident Adviser, Men's Residence Halls (1953-1953).

Cornwell, Anna Bertha, M.A., Head Resident, Women's Residence Halls (1954-1954).

Covey, Martha Hunt, M.A. in L.S., Assistant in Library, Reference and Bibliography (1954-1954).

Covington, Harrison Wall, M.F.A., Assistant Professor of Art (1949-1952).

Cowan, Russell Walter, Ph.D. (California), Associate Professor of Mathematics (1947-1947).

Cox, Carlisle Barksdale, B.A., Captain, Armor, Assistant Professor of Military Science and Tactics (1955-1955).

Cox, Ernest Haynes, Ph.D. (North Carolina), Professor of English and Logic; Counselor (1947-1947).

Cox, Jack D., Assistant Meteorologist, Weather Forecasting Service, U.S.D.A. (1951-1951) (Resigned September 10, 1956).

Cox, Merlin Gwinn, Ph.D. (Florida), Assistant Professor of Social Sciences (1955-1956).

Cox, Robert Sidney, Ph.D (North Carolina State), Associate Plant Pathologist, Everglades Experiment Station (1954-1954).

Crall, James Monroe, Ph.D. (Missouri), Plant Pathologist in Charge, Watermelon Investigations Laboratory (1952-1954).

Cramer, William Herbert, Ph.D. (Pennsylvania State), Assistant Research Professor, Engineering and Industrial Experiment Station (1953-1953).

Crampton, Charles Frieman, Ph.D. (Indiana), Assistant Professor of Pathology, College of Medicine (1956-1956).

Craps, John Ellis, Ph.D. (Johns Hopkins), Assistant Professor of German (1946 [39-40] 1952).

Craven, Roy C., M.F.A., Instructor in Art (1954-1954).

Crawshaw, Allan, Ph.D. (Manchester), Assistant in Research, Chemistry (1956-1956).

Creighton, John Thomas, Ph.D. (Ohio State), Professor of Entomology and Head of Department (1929-1937).

Crenshaw, Clyas Lee, M.S., Assistant Economist, Agricultural Experiment Station (1953-1953).

Cresap, Ida Keeling, Librarian, Agricultural Experiment Station (1923-1923).

Crews, James William, Ed.D. (Indiana), Assistant Professor of Education (1948-1954).

Crickenberger, Margaret Elizabeth, M.S., Assistant Professor of Physical Education (1955-1955).

Crist, Raymond E., Docteur es Lettres (Grenoble, France), Research Professor of Geography (1951-1951).

Crist, Robert Louis, M.A., Interim Instructor in Speech and English (1955-1955).

Cromartie, Alice Lucille, M.S., Assistant Nutritionist, Agricultural Extension Service, Tallahassee (1951-1951).

Crosland, Robert Elder, B.Arch., A.I.A., Assistant Professor of Architecture (1955 [51-53] 1955).

Cross, Clark Irvin, Ph.D. (Washington), Associate Professor of Geography and Physical Sciences (1949-1954).

Crowe, Marguerite O'Loghlin, M.S., Interim Assistant Research Professor, Engineering and Industrial Experiment Station (1955-1955).

Crown, John L., Captain, Assistant Professor of Air Science (1956-1956).

Crowson, Betty Mae, M.A.E., Assistant Professor of Physical Education (1949-1955).

Crutcher, George Lee, M.A.E., Associate Professor of Visual Instruction and Head of Department, General Extension Division (1946-1946).

Cumbee, Carroll Fleming, M.A.E., Associate Professor of Education (1936-1946).

Cunha, Tony Joseph, Ph.D. (Wisconsin), Professor of Animal Husbandry and Head of Department; Animal Husbandman and Head of Department, Agricultural Experiment Station; Animal Industrialist and Head of Department, Agricultural Extension Service (1948-1950).

Cunningham, Hugh W., M.A., Instructor in Journalism and Communications (1955-1955).

Cunningham, Myron Arthur, Ed.D. (Northwestern), Associate Professor of Education (1953-1953).

Curran, Robert Lynn, Ed.D. (Harvard), Associate Professor of Education (1952-1956).

Cutler, Ronald John, M.A., Assistant Professor of English (1946-1949).

Dahlgard, Muriel Genevieve, Ph.D. (Kansas), Assistant Research Professor, Cancer Research (1956-1956).

Dalsheimer, Barbara Corinne, M.P.H., Teacher, P. K. Yonge Laboratory School (1955-1955).

Damron, Clarence Frazier, P.E.D. (Indiana), Assistant Professor of Professional Physical Education (1953-1953).

Danburg, Russell Laverne, M.M., Associate Professor of Music (1948-1949).

Danis, Anthony Leo, M.S., Research Professor, Engineering and Industrial Experiment Station (1953-1953).

Dann, Thomasson Philip, M.D. (Louisiana State), Visiting Lecturer in Anatomy, College of Medicine (1956-1956).

Darby, John F., Ph.D. (Wisconsin), Associate Plant Pathologist, Central Florida Experiment Station (1951-1956).

Dauer, Manning Julian, Ph.D. (Illinois), Professor of Political Science and Head of Department (1933-1950).

DaVault, James W., Ph.D. (Columbia), Professor of Accounting (1947-1947).

Davidson, Robert Franklin, Ph.D. (Yale), Professor of Humanities and Head of Department (1946-1946).

Davis, Edward Arnold, Ed.D. (Florida), Assistant Professor of Education; Director, P. K. Yonge Laboratory School (1951-1951).

Davis, George Kelso, Ph.D. (Cornell), Professor of Animal Nutrition and Animal Nutritionist, Agricultural Experiment Station (1942-1942).

Davis, Harlan Wayne, Assistant Meteorologist, Weather Forecasting Service, U.S.D.A. (1954-1954).

Davis, Horance Gibbs, M.A., Instructor in Journalism and Communications (1954-1954).

Davis, John Henry, Ph.D. (Chicago), Professor of Botany (1946-1946).

Davis, John Wesley, B.S.A., Assistant in Entomology-Pathology, Citrus Experiment Station (1951-1951).

Davis, Marian Victoria, M.A., Instructor, P. K. Yonge Laboratory School (1954-1954).

Davis, Robert Paul, M.A., Interim Instructor in Social Sciences (1956 [53-55] 1953).

Day, James Westbay, J.D., Professor of Law (1929 [21-27] 1930).

Day, Richard L., M.A., Instructor in Geography (1950-1950).

Dean, Rollo Hiram, Assistant Meteorologist, Weather Forecasting Service, U.S.D.A. (1942-1942).

Decker, Phares, Ph.D. (Cornell), Professor of Plant Pathology and Head of Department; Plant Pathologist and Head of Department, Agricultural Experiment Station (1942-1955).

Dehner, Albert Harold, LL.B., Ph.D. (Ohio State), Professor of Real Estate (1954-1954).

Deinzer, Harvey T., LL.B., Ph.D. (Michigan), C.P.A., Professor of Accounting (1947-1949).

Delony, Dexter, LL.M., Professor of Law (1948-1951).

Dennard, Robert Lee, B.S.B.A., C.P.A., Assistant Comptroller (1953-1954).

Dennis, Walter Roland, D.V.M., (Cornell), Assistant Professor of Parasitology and Assistant Parasitologist, Agricultural Experiment Station (1952-1952).

Dennison, Raymond Alexander, Ph.D. (Iowa), Professor of Food Technology and Nutrition and Head of Department; Biochemist and Head of Department, Agricultural Experiment Station (1945-1956).

Denny, Don William, Instructor in Art (1955-1955).

DeReggi, Aime Sylvester, B.M.E., Instructor in Engineering Graphics (1956-1956).

Derrick, Clarence, Ph.D. (Chicago), Associate Professor of English and Humanities (1953-1953).

Deszyck, Edward John, Ph.D. (Purdue), Associate Horticulturist, Citrus Experiment Station (1950-1950).

Deurloo, Henry William, M.D. (Michigan), University Physician and Assistant Director, Student Health Department (1951-1956).

Devine, Carl Thomas, Ph.D. (Michigan), C.P.A., Professor of Accounting (1955-1955).

DeWitt, Robert M., Ph.D. (Michigan), Assistant Professor of Biological Sciences (1954-1954).

Diamant, Alfred, Ph.D. (Yale), Associate Professor of Political Science (1950-1956).

Dickenson, Carrie Elizabeth, M.A., Clothing and Textile Specialist, Agricultural Extension Service, Tallahassee (1954 [41-52] 1954).

Dickey, Dallas Claude, Ph.D. (Louisiana State), Professor of Speech (1946-1950).

Dickey, Ralph Davis, M.S.A., Horticulturist, Agricultural Experiment Station (1927-1955).

Dickinson, Joshua Clifton, Ph.D. (Florida), Curator of Biological Sciences, Florida State Museum, and Associate Professor of Biology (1946-1955).

Diettrich, Sigismond deRuedesheim, Ph.D. (Clark), D.Sc. (Royal Hungarian Palatine-Joseph), Professor of Geography and Head of Department (1931-1945).

Dietz, John Wamser, M.A., Professor of Finance (1940-1946).

Diggs, Ethel Atkinson, B.A., Interim Teacher, P. K. Yonge Laboratory School (1955-1955).

Dinman, Robert, M.A., C.P.A., Professor of Accounting (1954-1954) (On leave 1956-1957).

Disney, Eunice Maude, M.L.S., Assistant in Library, Technical Processes (1956-1956).

Dixon, James Cannon, Ph.D. (North Carolina), Professor of Psychology and Associate, Psychological Clinic (1949-1956).

Dodson, Glenna Ardath, M.S., Instructor in Education (1952-1952).

Doherty, Herbert Joseph, Ph.D. (North Carolina), Assistant Professor of Social Sciences (1953-1955).

Donovan, Clement Harold, Ph.D. (North Carolina), Professor of Economics and Head of Department (1940-1952).

Dornbush, Louis Wayne, B.S., Captain, Corps of Engineers, Assistant Professor of Military Science and Tactics (1954-1954).

Doty, Franklin Ahasuerus, Ph.D. (Iowa), Associate Professor of Social Sciences; Counselor (1946-1951).

Doty, Robert Bruce, M.S., Assistant in Bacteriology, Agricultural Experiment Station (1956-1956).

Dougherty, Marshall Harding, B.S., Collaborator, Citrus Experiment Station (1953-1953).

Doughman, John, M.Ed., Teacher-Trainer in Trade and Industrial Education (1955-1955).

Douglass, Carol Crews, M.Ed., Teacher, P. K. Yonge Laboratory School (1955-1955).

Dovell, Junius Elmore, Ph.D. (North Carolina), Professor of Political Science and Social Sciences (1946-1955).

Dovener, Robert Fourmier, B.S., Assistant Campus Engineer (1955-1955) (Resigned September 7, 1956).

Dow, Eddy Weber, M.A., Interim Instructor in English (1955-1955).

Dowd, David Lloyd, Ph.D. (California), Associate Professor of History (1949-1954).

Dowling, Herndon G., Ph.D. (Michigan), Post-doctoral Research Fellow in Biology (1956-1956).

Downey, Paul Milton, Ph.D. (Florida), Associate Professor of Industrial Engineering and Associate Research Professor, Engineering and Industrial Experiment Station (1956-1956).

Draper, Samuel Duane, M.B.A., C.P.A., Fiscal Contract Officer, Business Office (1953-1954).

Drayton, Sarah, M.A., Interim Instructor in Education (1956-1956).

Dresdner, Richard David, Ph.D. (Pennsylvania State), Associate Research Professor, Engineering and Industrial Experiment Station; Associate Research Professor of Chemistry (1953-1953).

Driggers, James Clyde, Ph.D. (Florida), Professor of Poultry Husbandry and Poultry Husbandman, Agricultural Experiment Station (1941 [39-40] 1955).

Driscoll, Mildred Lunaas, M.Ed., Teacher, P. K. Yonge Laboratory School (1956-1956).

Ducharme, Ernest Peter, Ph.D. (Minnesota), Plant Pathologist, Citrus Experiment Station (1946-1956).

Duer, Margaret Dickinson, B.S. in L.S., Assistant Librarian and Head of Circulation Department (1941-1943).

Dugger, Willie Mack, Ph.D. (North Carolina State), Associate Plant Physiologist, Agricultural Experiment Station (1955-1955).

Duncan, David Beattie, Ph.D. (Iowa State), Professor of Agronomy and Statistician, Agricultural Experiment Station (1955-1955) (Resigned August 31, 1956).

Duncan, James Moyer, M.S., Interim Associate Research Professor, Engineering and Industrial Experiment Station (1955 [48-53] 1955).

Dunkle, John Robert, Ph.D. (Clark), Assistant Professor of Physical Sciences and Geography (1949-1954).

DUNKS, FRED, Major, Ordnance Corps, Assistant Professor of Military Science and Tactics (1955-1955).

DUNN, EDGAR STREETER, Ph.D. (Harvard), Associate Professor of Economics (1947-1955) (On leave 1956-1957).

DUNSON, WILLIAM MARTIN, Superintendent of Conservation Reserve (1939-1939).

DURRANCE, CHARLES LIVINGSTON, Ed.D. (Columbia), Professor of Education (1940-1952).

DURRANCE, KENNETH LEROY, B.S.A., Assistant Animal Industrialist, Agricultural Extension Service (1954-1955).

DUSENBURY, WINIFRED LOESCH, Ph.D. (Florida), Interim Instructor in English (1955-1955).

DWYER, ROY EUGENE, M.Ed., Instructor, P. K. Yonge Laboratory School (1956-1956) (Resigned September 30, 1956).

DYER, DONALD RAY, Ph.D. (Northwestern), Associate Professor of Geography (1950-1955).

EADIE, DONALD, M.S.E., Assistant Professor of Electrical Engineering and Assistant Research Professor, Engineering and Industrial Experiment Station (1952-1952).

EBERSOLE, ROBERT PELOT, M.F.A., Assistant Professor of Art (1953-1955).

ECKDAHL, JACK POLK, M.Ed., Assistant Professor of Physical Education (1951-1955).

EDDINS, AUTHER HAMNER, Ph.D. (Iowa State), Plant Pathologist in Charge, Potato Investigations Laboratory (1928-1937).

EDMONDSON, CORNELIA, M.S., Assistant Professor of Physical Education and Clinician, Adapted and Corrective Exercises Clinic (1948-1952).

EDSON, CHARLES GRANT, M.S.E., Associate Professor of Engineering Mechanics (1946-1951).

EDSON, SETON NORMAN, M.S., Assistant Professor of Soils (1950-1951).

EDWARDS, GEORGE JOHN, B.A., Assistant in Chemistry, Citrus Experiment Station (1953-1953).

EDWARDS, JOSHUA LEROY, M.D. (Tulane), Professor of Pathology and Head of Department, College of Medicine (1955-1955).

EDWARDS, RICHARD ARCHER, Ph.D. (North Carolina), Professor of Geology and Head of Department (1940-1948).

EDWARDSON, JOHN RICHARD, Ph.D., (Harvard), Assistant Professor of Agronomy and Assistant Agronomist, Agricultural Experiment Station (1953-1953).

EGGERT, CHESTER LEE, Ed.D. (Indiana), Professor of Education (1948-1954).

EHNINGER, DOUGLAS WAGNER, Ph.D. (Ohio State), Associate Professor of Speech (1950-1955).

EHRMANN, WINSTON WALLACE, Ph.D. (Yale), Professor of Sociology; Head, Marriage and Family Clinic (1938-1946).

EIBNER, JOHN R., B.A., Assistant Football Coach (1950-1950).

EIDSNESS, FREDERIC A., Ph.D. (Florida), Associate Research Professor of Chemistry (1956-1956).

ELDER, ANGELINE H., M.A., Research Assistant, Cancer Research Laboratory (1955-1955).

ELGERD, OLLE INGEMAR, D.Sc. (Washington, Missouri), Associate Professor of Electrical Engineering (1956-1956).

ELKINS, BRONNA MAE, M.Ed., Assistant State Girls' 4-H Club Agent, Agricultural Extension Service, Tallahassee (1952-1952).

ELLERBE, HELEN CUBBERLY, B.S. in L.S., Assistant in Library, Technical Processes (1950 [41-43] 1950).

Elliott, Herschel Hugh, Ph.D. (Yale), Interim Assistant Professor of Logic and Humanities (1955-1955).

Ellner, Paul D., Ph.D. (Maryland), Instructor in Microbiology, College of Medicine (1956-1956).

Elmore, William Earl, B.S., C.P.A., Assistant Business Manager (1950-1955).

Emig, Elmer Jacob, M.A., Professor of Journalism and Communications (1927-1928).

Emmel, Mark Wirth, D.V.M. (Iowa State), Professor of Veterinary Science and Veterinarian, Agricultural Experiment Station (1933-1936).

Eno, Charles Franklin, Ph.D. (Purdue), Associate Soil Microbiologist, Agricultural Experiment Station (1950-1956).

Enwall, Hayford Octavius, LL.B., Professor of Law (1956-1956).

Eshelman, Silas Kendrick, J.D., M.E., Professor of Industrial Engineering (1922-1956).

Eutsler, Roland Byerly, Ph.D. (Pennsylvania), Professor of Economics (1935-1935) (Resigned September 4, 1956).

Fagen, William Frederick, M.S., Associate Professor of Electrical Engineering and Associate Research Professor, Engineering and Industrial Experiment Station (1947-1949).

Fain, John Tyree, Ph.D. (Vanderbilt), Professor of English; Counselor (1947-1951).

Fairing, Robert Lewis, Ph.D., (Pittsburgh), Associate Professor of Citizenship and Community Training and Head of Department, General Extension Division (1947-1949).

Farber, Eric Alexander, Ph.D. (Iowa), Professor of Mechanical Engineering and Research Professor, Engineering and Industrial Experiment Station (1954-1954).

Fawcett, Mary Solte, B.A.E., Teacher-Dietitian, P. K. Yonge Laboratory School Cafeteria (1937-1937).

Fearney, Edward Maurice, B.Arch., A.I.A., Assistant Professor of Architecture (1946-1948).

Feaster, John Pipkin, Ph.D. (North Carolina), Assistant Biochemist, Agricultural Experiment Station (1951-1951).

Felix, Glenn Allen, M.A., Resident Adviser, Men's Residence Halls (1954-1954).

Fenn, Henry Anderson, LL.B., Dean of the College of Law and Professor of Law (1948-1948).

Fernandez, Pedro Villa, M.A., Professor of Spanish (1947-1951).

Feuerlein, Willy John Arthur, Ph.D. (Yale), Visiting Professor of Economics (1956-1956).

Fifield, Willard Merwin, M.S., Provost for Agriculture (1932-1955).

Finkle, Jason Leonard, M.A., Instructor in Social Sciences (1953-1953).

Fisch, A. Lincoln, M.S., Resident Adviser, Men's Residence Halls (1953-1953) (Resigned July 17, 1956).

Fisher, Francine, M.S., Assistant Plant Pathologist, Citrus Experiment Station (1946-1946).

Fiskel, John Garth Austin, Ph.D. (McGill), Associate Professor of Soils and Associate Biochemist, Agricultural Experiment Station (1951-1956).

Flanigan, Frank McChesney, M.S.M.E., Associate Professor of Mechanical Engineering and Associate Research Professor, Engineering and Industrial Experiment Station (1947-1954).

Flowers, John Wilson, Ph.D. (Virginia), Professor of Physics (1947-1953).

Floyd, Ben Harrell, B.S.A., Assistant State Boys' 4-H Club Agent, Agricultural Extension Service (1954 [51-52] 1955).

Floyd, Joe S., Ph.D. (North Carolina), Professor of Finance (1950-1956) (Resigned September 4, 1956).

Fogle, Stephen Francis, Ph.D. (Illinois), Associate Professor of English (1946-1946).

Fohl, Ruth Kathleen, M.Ed., Teacher, P. K. Yonge Laboratory School (1955-1955).

Foldberg, Henry Christian, Assistant Football Coach (1952-1952).

Foote, Perry Albert, Ph.D. (Wisconsin), Dean of the College of Pharmacy and Professor of Pharmaceutical Chemistry; Director, Bureau of Professional Relations (1928-1949).

Forbes, Richard B., Ph.D. (Pennsylvania State), Assistant Soil Chemist, Central Florida Experiment Station (1956 [48-53] 1948).

Ford, Ernest S., Ph.D. (Chicago), Professor of Botany (1947-1949).

Ford, Harry W., Ph.D. (Ohio State), Associate Horticulturist, Citrus Experiment Station (1950-1956).

Fordham, Leon Francis, M.A., B.S. in L.S., Assistant in Library, Circulation (1953-1953).

Fordyce, Joseph Warder, Ed.D. (Florida), Associate Professor of Education (1953-1955).

Forsee, William Thomas, Ph.D. (Florida), Chemist in Charge, Everglades Experiment Station (1937-1952).

Forsman, Marion Edwin, Ph.D. (Iowa State), Professor of Electrical Engineering; Assistant Director, Engineering and Industrial Experiment Station (1955-1955).

Foster, Charles Richard, Ed.D. (Harvard), Professor of Education and Assistant Dean, College of Education (1947-1955).

Fouts, Everett Lincoln, Ph.D. (Iowa State), Professor of Dairy Science and Head of Department; Dairy Technologist and Head of Department, Agricultural Experiment Station (1940-1949).

Fowler, Howard Gill, M.Ed., Education Specialist in Vocational Education (1955-1955).

Fox, Lauretta Ewing, Ph.D. (Illinois), Associate Professor of Pharmacognosy and Pharmacology (1949-1955).

Fox, William McNair, Ph.D. (Ohio State), Assistant Professor of Industrial Relations and Management (1954-1954).

Francis, Ella Stone, M.A. in L.S., Librarian, P. K. Yonge Laboratory School (1955-1955).

Franke, Fritz Richard, B.Ch.E., Assistant in Research, Engineering and Industrial Experiment Station (1956-1956).

Franks, Lee Emery, M.S., Assistant Professor of Journalism and Communications and Producer-Director, TV Production Center (1954-1954).

Frazer, Percy Warner, M.F., Associate Professor of Forest Management (1937-1949).

Frederick, William, B.E.E., Assistant Research Professor, Engineering and Industrial Experiment Station (1953-1953).

Frederick, William Crittenden, M.A., Instructor in Social Sciences (1955-1955).

Freeman, George Roland, B.S.A., Superintendent of Field Operations, Agricultural Experiment Station (1950-1950).

Freeman, Richard David, C.W.O., Administrative Assistant, Military Science and Tactics (1954-1954).

Freeman, Thomas Edward, Ph.D. (Louisiana State), Assistant Plant Pathologist, Agricultural Experiment Station (1956-1956).

Freeman, Watson Louis, B.M.E., Research Assistant, Engineering and Industrial Experiment Station (1953-1953).

FREGLY, MELVIN JAMES, Ph.D. (Rochester), Assistant Professor of Physiology, College of Medicine (1956-1956).

FRENCH, ROWLAND BARNES, Ph.D. (Iowa), Biochemist, Agricultural Experiment Station (1935-1943).

FRIED, MELVIN, Ph.D. (Yale), Interim Assistant Professor of Biochemistry, College of Medicine (1956-1956).

FRISTOE, CHARLES WESLEY, Ph.D. (Illinois), Associate Professor of Economics (1950-1955).

FRY, FOREST, B.S., Captain, Assistant Professor of Air Science (1953-1953) (Resigned August 20, 1956).

FULLER, DAVID DOWD, M.Ed., Baseball Coach and Assistant Football Coach (1946-1946).

FURMAN, THOMAS DESAUSSURE, M.S.C.E., Associate Professor of Civil Engineering and Associate Research Professor, Engineering and Industrial Experiment Station (1951-1953).

FURMAN, WALTER LAURIE, M.S., Interim Instructor in Physical Sciences (1955-1955).

GAGER, WILLIAM ATKINS, Ph.D. (Peabody), Professor of Mathematics (1942-1949).

GAITANIS, LOUIS ANDREW, LL.B., M.A., Associate Professor of Business Law and Social Insurance (1946-1951).

GAMMON, NATHAN, Ph.D. (Ohio State), Soils Chemist, Agricultural Experiment Station (1946-1946).

GANO, OVID RAYMOND, B.E.E., Assistant Research Professor, Engineering and Industrial Experiment Station (1951 [44-45; 47-49] 1944).

GARRIS, EDWARD WALTER, Ph.D. (Peabody), D.Sc. (Clemson), Professor of Education and Head of Agricultural Education (1927-1927).

GAY, JAMES M., B.A.J., Director of Sports Publicity (1951-1954).

GEHAN, FREDERICK EDWARD, M.A.E., Associate Professor of English (1946-1955).

GELTZ, CHARLES GOTTLIEB, M.S.F., Professor of Silviculture (1946-1946).

GEMMER, EUGENE W., M.F., Assistant Professor of Forestry, State Ranger School (1949-1949).

GENNARO, JOSEPH FRANCIS, Ph.D. (Pittsburgh), Assistant Professor of Anatomy, College of Medicine (1956-1956).

GENUNG, WILLIAM GORDON, M.S., Assistant Entomologist, Everglades Experiment Station (1949-1949).

GEORG, JAMES GONDER, Assistant Meteorologist, Weather Forecasting Service, U.S.D.A. (1952-1952).

GEORGE, THEODORE SAMUEL, Ph.D. (Duke), Professor of Electrical Engineering and Research Professor, Engineering and Industrial Experiment Station (1956 [38-45] 1956).

GERALDSON, CARROLL MORTON, Ph.D. (Wisconsin), Associate Soils Chemist, Gulf Coast Experiment Station (1951-1956).

GERRITSEN, FRANCISCUS, Diploma of Civil-Engineer (Holland), Assistant Research Professor, Engineering and Industrial Experiment Station (1956-1956).

GILCREAS, FRANK WELLINGTON, B.A., Professor of Sanitary Science and Research Professor, Engineering and Industrial Experiment Station (1955-1955).

GILLESPIE, STUART EDGAR, B.A., Captain, Assistant Professor of Air Science (1954-1954).

GILLIES, ELIZABETH WEBSTER, B.S. in L.S., Assistant Librarian, Reference and Bibliography (1956-1956).

GILLIGAN, BURTON H., LL.B., Interim Instructor in Aeronautical Engineering (1956-1956).

GILMAN, ROBERT LOUIS, M.S., Assistant in Agronomy, Agricultural Experiment Station (1950-1950).

GLICKSBERG, MANDELL, LL.B., Associate Professor of Law (1953-1956).

GLUNT, JAMES DAVID, Ph.D. (Michigan), Professor of History and Americanism (1923-1938).

GODWIN, GRANT MURRAY, M.Ag., Assistant State Boys' 4-H Club Agent, Agricultural Extension Service (1952-1953).

GODWIN, MARSHALL REID, Ph.D. (Cornell), Associate Professor of Agricultural Economics and Associate Marketing Economist, Agricultural Experiment Station (1950-1950).

GOGGIN, JOHN M., Ph.D. (Yale), Associate Professor of Sociology and Anthropology (1948-1948).

GOIN, COLMAN JETT, Ph.D. (Florida), Professor of Biological Sciences (1942-1956).

GOMEZ, OSBORNE LORRAINE, B.A., Teaching Assistant, Extension Surveys and Research, General Extension Division (1953-1953).

GONZALEZ, JUAN ORTAS, M.S.Ch.E., Assistant Professor of Mechanical Engineering and Assistant Research Professor, Engineering and Industrial Experiment Station (1952-1956).

GOODMAN, DONALD CHARLES, Ph.D. (Illinois), Assistant Professor of Anatomy, College of Medicine (1956-1956).

GOODRICH, MAY E., B.A., Instructor in Physical Education and Physical Therapist, Student Health Department (1955-1955).

GOODWIN, FRANK, Ph.D. (Pennsylvania), Professor of Marketing (1947-1949).

GORDON, IRA JAY, Ed.D. (Columbia), Associate Professor of Education (1956-1956).

GORDON, MORTON M., Ph.D. (Washington), Associate Professor of Physics (1950-1954).

GRADY, EUNICE, M.S., Assistant to State Home Demonstration Agent in Trainee Work, Agricultural Extension Service, Tallahassee (1934-1953).

GRAEFFE, ARNOLD DIDIER, Ph.D. (Berlin), Associate Professor of Humanities (1948-1948).

GRAHAM, BERT WILSON, B.S.B.A., Director of Food Services (1952-1952).

GRAMLING, LEA GENE, Ph.D. (Florida), Professor of Pharmaceutical Chemistry (1946-1956).

GRANBERRY, JULIAN MICHAEL, M.A., Instructor in Social Sciences (1955-1955).

GRAND, JOHN LOUIS ROCHON, M.A.Arch., A.I.A., Professor of Architecture (1937-1947).

GRAVELY, LUCIUS BROCKENBOROUGH, M.S.B., University Cashier (1951-1951).

GRAVES, RUFUS LEE, M.Arch., Assistant Professor of Architecture (1956-1956).

GRAY, LEON ARCHIBALD, M.A.E., Assistant Professor of Education (1941-1948).

GREATHOUSE, GLENN ARTHUR, Ph.D. (Duke), Research Professor, Engineering and Industrial Experiment Station (1956 [51-55] 1951).

GREEN, ELEANOR KUHLMAN, Ed.D. (Florida), Assistant Professor of Education (1940-1954).

GREEN, VICTOR EUGENE, Ph.D. (Purdue), Associate Agronomist, Everglades Experiment Station (1951-1956).

GREENE, CALVIN CLAY, M.S.M.E., Director of Plant and Grounds and Campus Engineer (1950-1950).

Greene, Robert Edward Lee, Ph.D. (Cornell) Professor of Agricultural Economics and Agricultural Economist, Agricultural Experiment Station (1948-1948).

Greenman, John Roosevelt, LL.B., Professor of Agricultural Economics (1945 [39-40] 1945).

Greer, Allen Wilkinson, M.A., Instructor in English (1955 [52-54] 1952).

Gregg, James Henderson, Ph.D. (Princeton), Associate Professor of Biology (1951-1956).

Gregg, Robert, M.E., LL.D. (Tusculum), Consultant in Industrial Engineering (1951-1951).

Greiner, John William, M.A., Assistant Professor of Physical Sciences (1950-1954).

Grierson-Jackson, William R. F., Ph.D., (Cornell), Associate Chemist, Citrus Experiment Station (1952-1956).

Griffin, Robert Cushman, M.A., Assistant Professor and Head of Publications, General Extension Division (1949-1951).

Griffith, Mildred Mason, Ph.D. (California), Associate Professor of Biological Sciences (1950-1956).

Grigsby, Mac G., B.A., Custodian of Buildings (1948-1950).

Grigsby, Shaw Earl, Ph.D. (Cornell), Assistant Professor of Sociology (1953-1953).

Grinter, Linton E., Ph.D. (Illinois), Dean of the Graduate School; Director of Research and Research Professor (1952-1952).

Grissom, Eugene Edward, M.F.A., Assistant Professor of Art (1953-1953).

Grizzard, Harry McNeil, B.S., Colonel, Infantry, Professor of Military Science and Tactics (1954-1954) (Resigned July 31, 1956).

Grobman, Arnold Brams, Ph.D. (Rochester), Director, Florida State Museum; Associate Professor of Biology (1946-1952).

Grodsky, May Roman, B.A., Assistant in Library, Documents (1951-1951).

Groeneveld-Meijer, Johannes Wiardus, Dipl. Arch., E.T.H., Assistant Professor of Architecture (1955-1955).

Gropp, Armin Henry, Ph.D. (Oregon), Professor of Chemistry (1947-1955).

Groth, John Henry, Ph.D. (Washington), Professor of Humanities (1946-1946).

Guistwhite, Jack Cole, B.S.B.A., Assistant Registrar, Machine Records, and Instructor in Economics (1947-1956).

Guiteras, George Gustavo, M.D. (Pennsylvania), University Physician (1949-1949).

Guzman, Victor Lionel, Ph.D. (Cornell), Assistant Horticulturist, Everglades Experiment Station (1952-1952) (Resigned September 8, 1956).

Hadlock, Edwin Harold, Ph.D. (Cornell), Professor of Mathematics (1948-1953).

Haimbach, David, M.Ed., Instructor in Education (1956-1956).

Haines, Aleyne Clayton, Ed.D. (Illinois), Associate Professor of Education (1952-1952).

Haines, Lewis Francis, Ph.D. (Michigan), Professor of Humanities; Director, University of Florida Press (1941-1950).

Hale, Lester Leonard, Ph.D. (Louisiana State), Dean of Men (1935-1956) (On leave 1956-1957).

Hall, Chesley Barker, Ph.D. (Cornell), Associate Horticulturist, Agricultural Experiment Station (1950-1956).

Hall, Merrill J., B.A., Assistant in Research, Health Center (1956-1956).

Hallam, George Walter, M.A., Interim Instructor in English (1956-1956).

Hallam, Thomas Bancroft, B.S., Assistant in Entomology-Pathology, Citrus Experiment Station 1954-1954).

Halperin, Don A., B.S.A.E., Assistant Professor of Architecture (1953-1953).

Halsey, Lawrence Henry, M.S.A., Assistant Horticulturist, Agricultural Experiment Station (1948-1948).

Hamacher, Howard Brockman, M.Arch., Assistant Professor of Architecture (1956-1956).

Hamblen, Charles Hillen, M.A.E., Instructor in Social Sciences and Academic Counselor, Intercollegiate Athletics (1955 [47-52] 1947).

Hamilton, Henry Glenn, Ph.D. (Cornell), Professor of Agricultural Economics and Head of Department; Agricultural Economist and Head of Department, Agricultural Experiment Station; Economist and Head of Department, Agricultural Extension Service (1923-1950).

Hamilton, Jefferson Merritt, B.S.Arch., A.I.A., Consulting Architect (1947-1948).

Hammond, Eugene Ashby, Ph.D. (North Carolina), Professor of Social Sciences; Counselor (1946-1955).

Hammond, Luther Carlisle, Ph.D. (Iowa State), Associate Professor of Soils and Associate Soil Physicist, Agricultural Experiment Station (1950-1955).

Hampson, Charles Marlow, M.S., Professor of Agricultural Extension (1937-1950).

Hancock, Robert Edgar, B.A., Assistant Editor, Agricultural Experiment Station and Agricultural Extension Service (1956-1956).

Hanks, Robert William, Ph.D. (Chicago), Assistant Plant Physiologist, Citrus Experiment Station (1955-1955).

Hanna, Paul Lamont, Ph.D. (Stanford), Professor of Social Sciences (1939-1946).

Hannon, Chancellor Irving, Ph.D. (Cornell), Assistant Nematologist, Citrus Experiment Station (1956-1956).

Hanson, Bernard Allen, M.A., Assistant Professor of Humanities (1947-1954).

Hardaway, Elliott, M.A., M.S. in L.S., Assistant Director of Libraries and Associate Professor of Library Science (1955-1955).

Hardy, Albert Victor, M.D. (Toronto), D.P.H. (Johns Hopkins), Professor of Bacteriology (1953-1953).

Hargett, Emil Retz, M.S.C.E., Assistant Professor of Civil Engineering (1955-1955).

Harkness, Donald Ray, Ph.D. (Minnesota), Assistant Professor of English (1950-1956).

Harkness, Roy Wendell, Ph.D. (California), Associate Chemist, Subtropical Experiment Station (1945-1955).

Harlan, William Edwards, M.A.E., Assistant Professor of Physical Education (1949-1954).

Harlow, Justin Edwards, Ph.D., (Florida), Associate Professor of Psychology; Head, Psychological Clinic (1948-1954).

Harrell, George Thomas, M.D. (Duke), Dean of the College of Medicine and Professor of Medicine (1954-1954).

Harris, David Payne, Ph.D. (Michigan), Instructor in English (1954-1954).

Harris, Emmett DeWitt, Ph.D., (Cornell), Assistant Entomologist, Everglades Experiment Station (1956-1956).

Harris, Henry Clayton, Ph.D. (Cornell), Agronomist, Agricultural Experiment Station (1943-1947).

Harrison, Dalton Sidney, M.S.A., Assistant Agricultural Engineer, Everglades Experiment Station (1953-1953).

Harrison, John A., Ph.D. (California), Associate Professor of History (1949-1954).

Hart, Donald John, Ph.D. (Wisconsin), Dean of the College of Business Administration (1956-1956).

Hart, Freeman Hansford, Ph.D. (Columbia), Associate Professor of Humanities (1946-1950).

Hart, Thomas Alonzo Edward, Ph.D. (Michigan), Professor of Humanities (1946-1954).

Hartmann, Frederick H., Ph.D. (Princeton), Professor of Political Science (1948-1956).

Haskell, Albert Russell, Ph.D. (Florida), Instructor in Pharmacognosy and Pharmacology (1951-1951) (Resigned October 15, 1956).

Haupt, Charles S., B.S.P., Associate Director, Bureau of Professional Relations, College of Pharmacy (1950-1950).

Havard, William C., Ph.D. (London), Associate Professor of Political Science and Director, Public Administration Clearing Service (1953-1956).

Hawkins, John Erskine, Ph.D. (Pennsylvania), Professor of Chemistry; Director, Naval Stores Research (1935-1944).

Hayes, Francis Clement, Ph.D. (North Carolina), Associate Professor of Spanish (1946-1946).

Haynie, John Dale, B.S.A., Apiculturist, Agricultural Extension Service (1947-1947).

Hayslip, Norman Calvin, B.S.A., Entomologist, Everglades Experiment Station (1946 [43-45] 1956).

Hayward, Frederick Warren, Ph.D., (Cornell), Associate Biochemist, Citrus Experiment Station (1956-1956).

Hazen, Marion William, M.S., Animal Husbandman in Charge, U.S.D.A., West Central Florida Experiment Station (1952-1952).

Helfer, William Charles, M.Ed., Teacher, P. K. Yonge Laboratory School (1956 [53-55] 1953).

Hellier, Evelyn Farris, B.S., Interim Assistant in Library, Education Library (1955-1955).

Henderson, Joseph Russell, M.S.A., Agronomist, Agricultural Extension Service (1935-1947).

Henderson, Leon Nesbitt, Ed.D. (Columbia), Professor of Education and Head of Secondary Education (1945 [40-43] 1955).

Hendrickson, Ellwood Robert, Ph.D. (Wisconsin), Associate Professor of Civil Engineering and Associate Research Professor, Engineering and Industrial Experiment Station (1950-1950).

Hendrickson, Rudolph, B.S., Assistant Chemist, Citrus Experiment Station (1947-1947).

Hentges, James Franklin, Ph.D. (Wisconsin), Associate Professor of Animal Husbandry and Associate Animal Husbandman, Agricultural Experiment Station (1952-1956).

Herbert, John Henry, M.S.A., Assistant Soil Conservationist, Agricultural Extension Service (1954-1954).

Herbert, Thomas Walter, Ph.D. (Princeton), Professor of English (1946-1951).

Herndon, Thomas Glenn, M.S.F., Assistant Professor of Forestry Management (1949-1953).

Herzberg, Mendel, Ph.D. (California), Assistant Professor of Bacteriology (1954-1954).

Heskin, Oscar Edward, Ph.D. (Minnesota), Professor of Economics (1938-1946) (On leave 1956-1957).

Hester, Janice Parham, B.S. in L.S., Assistant in Library, Technical Processes (1946 [27-30] 1946).

HETENYI, LASZLO JOSEPH, M.A., Assistant Professor of Logic and Humanities (1950-1950).

HETRICK, LAWRENCE ANDREW, Ph.D. (Ohio State), Associate Professor of Entomology (1947-1951).

HIATT, LELAND WILBUR, Director of Alumni Affairs (1952-1952).

HICKS, DORA ADELINE, Ed.D. (Texas), Professor of Health Education (1948-1955).

HIGGINS, MATT, M.D. (Cincinnati), Collaborator, Cancer Research Laboratory (1954-1954).

HIGLEY, ROBERT PAUL, B.S.B.A., Major, Transportation Corps, Assistant Professor of Military Science and Tactics (1953-1953) (Resigned September 4, 1956).

HIJAB, WASFI AHMED, Ph.D. (Florida), Interim Assistant in Research, Engineering and Industrial Experiment Station (1955-1955) (Resigned September 15, 1956).

HILL, CLIFTON CARR, M.S., Associate Professor of Engineering Mechanics (1947-1947).

HILL, ELMER CARL, B.S.A., Collaborator, Citrus Experiment Station (1951-1951).

HILL, THOMAS JORDAN, Ed.D. (Florida), Assistant Professor and Principal, P. K. Yonge Laboratory School (1951-1955).

HILLIARD, PAULINE, Ed.D. (Columbia), Professor of Education (1950-1952).

HINCKLEY, ELMER DUMOND, Ph.D. (Chicago), Professor of Psychology and Head of Department; Associate, Psychological Clinic (1925-1951).

HINE, EDWARD BUCKINGHAM, M.E., Assistant Professor of Engineering Graphics (1952-1952).

HINES, VYNCE ALBERT, Ed.D. (Illinois), Professor of Education and Head of Foundations of Education (1947-1955).

HINKLEY, HENRY ROBERT, Assistant Director of Plant and Grounds, Health Center (1955-1955).

HINKLEY, NANCY ENGSTROM, M.A., Interim Assistant Curator, Florida State Museum (1956-1956).

HINSON, KUELL, Ph.D. (Wisconsin), Cooperative Agent, U.S.D.A., Agricultural Experiment Station (1955-1955).

HINTERMISTER, JOHN H., B.S., Assistant Director of Food Services (1954-1954).

HINZ, CHARLES FRANK, Ph.D. (Kansas State), Interim Assistant Research Professor of Bacteriology (1956-1956).

HIPP, JACOB EDWARD, LL.B., Instructor in Insurance (1955-1955).

HIPPLE, WALTER JOHN, Ph.D. (Chicago), Assistant Professor of Humanities (1952-1952) (Resigned September 11, 1956).

HIXON, IMOGENE, B.S. in L.S., Assistant Librarian and Interim Head, Technical Processes Department (1949-1956).

HODGES, ELVER MYRON, Ph.D. (Rutgers), Agronomist, Range Cattle Experiment Station (1941-1949).

HODGES, HENRY GREEN, Ph.D. (Pennsylvania), Professor of Management (1949-1951).

HODGES, JAMES ROLAND, Ph.D. (North Carolina), Assistant Professor of English (1950-1950).

HODGES, VERNON S., M.Arch., Assistant Professor of Architecture (1954-1954).

HODGSON, JACQUELINE LOU, M.A., Instructor in Economics (1956-1956).

HOLBROOK, HOLLIS HOWARD, B.F.A., Professor of Art (1938-1948).

HOLMES, ELWYN SPRIEULL, M.E., Assistant Agricultural Engineer, Agricultural Experiment Station (1956-1956).

HOLMGREN, JOHN DANIEL, Ph.D. (Florida), Assistant in Research, Engineering and Industrial Experiment Station (1952-1952) (On leave 1956-1957).

Holstein, Helen Davis, M.A., District Home Demonstration Agent, Agricultural Extension Service, Tallahassee (1952-1955).

Holtsberg, Harold Isidor, B.S.A., Assistant in Entomology-Pathology, Citrus Experiment Station (1950-1950).

Hood, C. Ian, M.B., Ch.B. (Liverpool), Instructor in Pathology, College of Medicine (1956-1956).

Hooser, Hobart, M.A., Assistant Football Coach (1950-1950).

Hoover, John Wesley, M.S.A.E., Associate Professor of Aeronautical Engineering and Interim Head of Department (1951-1956).

Hoover, Maurice William, Ph.D. (Florida), Assistant Horticulturist, Agricultural Experiment Station (1952-1952).

Hopkins, Edwin Fraser, Ph.D. (Cornell), Collaborater, Citrus Experiment Station (1951-1951).

Horne, Edward Porter, Ph.D. (Iowa), Associate Professor of Psychology (1949-1949).

Horner, Earl Stewart, Ph.D., (Cornell), Associate Agronomist, Agricultural Experiment Station (1950-1956).

Horton, Paul N., Major, Infantry, Assistant Professor, Army Science and Tactics (1956-1956).

Houk, Denton, M.S., Camp Director, Florida Union (1956-1956).

Hoveland, Carl Soren, M.S., Interim Assistant in Agronomy, Agricultural Experiment Station (1955-1955).

Hovey, Scott William, J.D., Associate Professor of Business Law (1952-1952).

Howard, William M., Ph.D., (Wisconsin), C.L.U., Associate Professor of Insurance (1955-1955).

Howe, Kenneth Jesse, Ph.D. (Cornell), Interim Assistant Professor of Botany (1956-1956).

Hrubecky, Henry Francis, Ph.D. (Iowa State), Associate Professor of Engineering Mechanics and Associate Research Professor, Engineering and Industrial Experiment Station (1955-1955).

Huang, Tzu Chuen, Ph.D. (Illinois), Associate Professor of Engineering Mechanics (1956-1956).

Huckaba, Charles Edwin, Ph.D. (Cincinnati), Associate Professor of Chemical Engineering and Associate Research Professor, Engineering and Industrial Experiment Station (1955-1955).

Huffman, Jacob Brainard, D.F. (Duke), Assistant Professor of Forest Products Technology (1952-1952).

Huggart, Richard Leigh, B.S., Collaborator, Citrus Experiment Station (1951-1951).

Hughes, Charles Roy, Ed.D. (Florida), Associate Professor of Correspondence Study Instruction and Head of Department, General Extension Division (1933-1946). (Deceased December 21, 1956).

Hull, Fred Harold, Ph.D. (Iowa State), Agronomist and Head of Department, Agricultural Experiment Station (1927-1948).

Hullihan, William Francis, M.P.H., Instructor in Physical Education (1955-1955).

Humphreys, Thomas Elder, Ph.D. (Pennsylvania), Assistant Biochemist, Agricultural Experiment Station (1955-1955).

Hunter, George William, Ph.D. (Illinois), Interim Professor of Biological Sciences (1956-1956).

Hunter, William Armstrong, S.J.D. (Harvard), Professor of Law (1949 [27-28] 1949) (Deceased July 31, 1956).

HUNZIKER, RUPERT RUDOLPH, Ph.D. (Iowa State), Assistant Entomologist, Citrus Experiment Station (1956-1956).

HURFF, GEORGE BRIAN, Ph.D. (Pennsylvania), Director, Bureau of Economic and Business Research and Research Professor (1948-1949).

HUSA, WILLIAM JOHN, Ph.D. (Iowa), Professor of Pharmacy and Head of Department (1923-1923).

HUSSEY, ROLAND FOUNTAIN, Sc.D. (Harvard), Assistant Professor of Biological Sciences (1953-1954).

HUTCHERSON, WILLIAM ROBERT, Ph.D. (Cornell), Professor of Mathematics (1949-1949).

HUTTON, CURTIS EVAN, Ph.D. (Iowa State), Vice Director in Charge, West Florida Experiment Station (1949-1949).

INGLE, KELSEY HUDLESON, M.A., Instructor, P. K. Yonge Laboratory School (1945-1952).

JACKSON, ELMO LOUIS, Ph.D. (Harvard), Professor of Economics (1946-1956).

JACUNSKI, EDWARD WALTER, M.A.E., Associate Professor of Engineering Graphics and Interim Head of Department; Associate Research Professor, Engineering and Industrial Experiment Station (1947-1956).

JAGGI, MARTIN PAUL, Ph.D. (Berne, Switzerland), Associate Professor of Physics (1953-1953).

JAMISON, FRANK STOVER, Ph.D. (Cornell), Professor of Vegetable Crops and Head of Department; Horticulturist and Head of Department, Agricultural Experiment Station; Vegetable Crops Specialist and Head of Department, Agricultural Extension Service (1934-1956).

JEFFERIES, MILDRED B., M.P.H., Assistant Professor of Bacteriology (1953-1953).

JEFFERS, ROBERT LEE, Ph.D. (Wisconsin), Associate Agronomist, West Florida Experiment Station (1954-1954).

JENSEN, ANTHONY SVEND, B.S., Assistant Farm Forester, Agricultural Extension Service (1953-1953).

JOHNS, ROE LYELL, Ph.D. (Columbia), Professor of Education and Head of Administration and Field Services (1946-1948).

JOHNSON, ADRAIN EARL, M.S., Assistant in Research, Engineering and Industrial Experiment Station (1954-1954) (On leave 1956-1957).

JOHNSON, CARL HENRY, Ph.D. (Washington), Professor of Pharmacognosy and Pharmacology; Director, Medicinal Plant Gardens (1939-1954).

JOHNSON, IRMGARD, Ph.D. (Denver), Assistant Professor of Humanities (1955-1955).

JOHNSON, MCMILLAN HOUSTON, M.A.Arch., Professor of Architecture (1946-1956).

JOHNSON, RAYMOND CLARENCE, M.S.E., Associate Research Professor, Engineering and Industrial Experiment Station (1946-1952).

JOHNSON, RICHARD SADLER, B.S.P., Registrar (1933-1939).

JOHNSON, ROGER BURR, Ph.D. (Cornell), Assistant Entomologist, Citrus Experiment Station (1952-1952).

JOHNSON, WARREN OSWALD, B.A., Meteorologist in Charge, Weather Forecasting Service, U.S.D.A. (1935-1938).

JOHNSON, WILLIAM EDWARD, B.E.E., Instructor in Electrical Engineering and Assistant in Research, Engineering and Industrial Experiment Station (1956 [46-51] 1946).

JOINER, JASPER NEWTON, M.Ag., Assistant Horticulturist, Agricultural Extension Service (1950-1953).

JONES, ANNE HARRISON, B.S., Assistant Registrar (1941-1952).

Jones, David Wilson, M.S.A., Assistant Soils Technologist, Range Cattle Experiment Station (1946-1946).

Jones, Edmund Ruffin, Ph.D. (Virginia), Professor of Biology (1946-1947).

Jones, Elise Cecile, B.A., Assistant in Research, Bureau of Economic and Business Research (1953-1953).

Jones, Ernest McClain, LL.B., Associate Professor of Law (1954-1954).

Jones, John Paul, M.A., Professor of Journalism and Communications (1948-1951).

Jones, Oscar Frederick, Ph.D. (Stanford), Associate Professor of German (1937-1945).

Jones, Richard Edward, Assistant Football Coach (1951-1951).

Jones, Rosemonde Miriam, M.L., Assistant in Library, Reference and Bibliography (1956-1956).

Jones, William Ellis, B.S.B.A., Business Manager (1948-1954).

Jones, William Hugh, M.Ag., Assistant Superintendent of Field Operations, Agricultural Experiment Station (1953-1953).

Jones, William Maurice, Ph.D. (Southern California), Assistant Professor of Chemistry (1956-1956).

Kacere, John C., M.F.A., Assistant Professor of Art (1953-1953).

Kahl, William Henry, M.S., Assistant Agricultural Engineer, Citrus Experiment Station (1956-1956).

Kalch, Lester Wilcox, B.S.A., Assistant in Poultry Husbandry, Agricultural Extension Service (1951-1951).

Kantor, Harry, Ph.D. (California), Assistant Professor of Political Science (1952-1952).

Karp, J. Robert, M.A., Assistant Professor of Economics (1949-1949).

Katterhenry, Arnold Allen, M.S., Assistant Professor of Civil Engineering (1948-1948) (On leave 1956-1957).

Kaufman, Clemens Marcus, Ph.D. (Minnesota), Director of School of Forestry and Professor of Forestry (1951-1951).

Kelbert, David Gustaf Alfred, Associate Horticulturist, South Florida Field Laboratory (1932-1946).

Kelly, Bruce William, Ph.D. (Florida), Assistant Agricultural Economist, Agricultural Experiment Station (1951-1953).

Kelly, Dudley R., B.S.Arch., A.I.A., Assistant Professor of Architecture (1955-1955).

Kelly, William Hale, Ph.D. (Rutgers), Interim Assistant Soils Chemist, Agricultural Experiment Station (1956-1956).

Kelsay, Robert Gene, M.A., Instructor in Social Sciences (1955-1955).

Kelsheimer, Eugene Gillespie, Ph.D. (Ohio State), Entomologist, Gulf Coast Experiment Station (1942-1942).

Kemp, Thomas George, M.A., Interim Instructor in English, Reading Laboratory and Clinic (1956-1956).

Kendall, Gladys Harbaugh, B.A., Home Industries and Marketing Specialist, Agricultural Extension Service, Tallahassee (1937-1949).

Kephart, Ralph Claude, M.S., Assistant Professor of Engineering Graphics and Assistant Research Professor, Engineering and Industrial Experiment Station (1953-1953).

Keppel, Reuben Arthur, B.Ch.E., Assistant Professor of Chemical Engineering and Assistant Research Professor, Engineering and Industrial Experiment Station (1955-1955).

KERN, JOSEPH HERSCHEL, Ph.D. (Ohio State), Assistant Professor of Pharmacy (1955-1955).

KERNS, WILLIAM HOLCOMB, B.S.J., Assistant Editor, News Bureau (1954-1954).

KERR, STRATTON HORSBURG, Ph.D. (Cornell), Assistant Entomologist, Agricultural Experiment Station (1953-1953).

KESSLER, CHARLES JOSEPH, B.S.M.E., Assistant Professor of Engineering Graphics (1952-1952) (Resigned November 10, 1956).

KESSLER, WILLIAM JOSEPH, Assistant Professor of Electrical Engineering and Assistant Research Professor, Engineering and Industrial Experiment Station; Engineer, Radio-TV Production Center (1943-1945).

KESTERSON, JAMES WALTER, M.S., Chemist, Citrus Experiment Station (1947-1956).

KIDD, KENNETH PAUL, Ph.D. (Peabody), Professor of Education (1938-1955).

KIDDER, FREDERICK ELWYN, M.A., Interim Assistant Director, School of Inter-American Studies (1956-1956).

KIDDER, RALPH WYMAN, M.S., Associate Animal Husbandman, Everglades Experiment Station (1932-1945).

KIKER, JOHN EWING, M.C.E., Professor of Civil Engineering and Research Professor, Engineering and Industrial Experiment Station (1947-1949).

KILBY, JOHN DAVIS, Ph.D. (Florida), Associate Professor of Biological Sciences (1947-1956).

KILLGORE, EARL HENDERSON, B.S., Lt. Colonel, Assistant Professor of Air Science (1954-1954).

KILLINGER, GORDON BEVERLY, Ph.D. (Iowa State), Agronomist, Agricultural Experiment Station (1941-1943).

KILPATRICK, WYLIE, Ph.D. (Brookings), Research Professor, Bureau of Economic and Business Research (1948-1948) (On leave 1956-1957).

KINCAID, RANDALL RICH, Ph.D. (Missouri), Plant Pathologist, North Florida Experiment Station (1929-1943).

KING, EMILY ELIZABETH, M.Ed., State Girls' 4-H Club Agent, Agricultural Extension Service, Tallahassee (1946-1953).

KING, FRED E., M.S., Resident Adviser, Men's Residence Halls (1951-1951).

KING, JOHN RALPH, Ph.D. (Cornell), Assistant Entomologist, Citrus Experiment Station (1955 [50-51] 1950).

KIRK, WILLIAM GORDON, Ph.D. (Iowa State), Vice Director in Charge, Range Cattle Experiment Station (1936-1941).

KIRKLAND, EDWIN CAPERS, Ph.D. (Northwestern), Professor of English (1946-1951) (On leave first semester 1956-1957).

KIRKPATRICK, MARTIN SMITH, M.A., Interim Instructor in English (1956-1956).

KISSEL, JOHN WALTER, Ph.D. (Michigan), Assistant Professor of Pharmacognosy and Pharmacology (1956-1956).

KLEEMEIER, ROBERT WATSON, Ph.D. (Michigan), Lecturer in Psychology (1952-1952).

KLEIN, MICHAEL, Ph.D. (California), Associate Research Professor, Cancer Research (1951-1953) (Resigned November 30, 1956).

KLEINSCHMIDT, ARTHUR CHARLES, Ph.D. (Iowa State), Assistant Dean of the College of Engineering and Professor of Industrial Engineering (1953-1955).

KLUGE, RALPH WENDEL, M.S., Professor of Civil Engineering and Head of Department (1951-1951).

KNIGHT, CONRAD WALLACE, M.A.E., Assistant Professor of Engineering Graphics (1950-1956).

KNORR, LOUIS CARL, Ph.D. (Cornell), Associate Histologist, Citrus Experiment Station (1948-1948).

KNOWLES, HAROLD LORAINE, Ph.D. (Kansas), Professor of Physics and Physical Sciences and Head, Department of Physical Sciences (1931-1954).

KNOWLES, LOIS NINA, M.A., Instructor in Nursing, College of Nursing (1956-1956).

KNOX, MARGARET ENID, M.S. in L.S., Associate Librarian and Head, Reference and Bibliography Department; Associate Professor of Library Science (1949-1951) (On leave 1956-1957).

KOCH, ARTHUR L., Ph.D. (Chicago), Assistant Professor of Biochemistry, College of Medicine (1956-1956).

KOEFOD, PAUL E., Ph.D. (Institute of International Studies, Geneva), Associate Professor of Economics (1956-1956).

KOEN, ROSS Y., M.A., Instructor in Social Sciences (1951-1951) (On leave 1956-1957).

KOGER, MARVIN, Ph.D. (Missouri), Professor of Animal Husbandry and Animal Husbandman, Agricultural Experiment Station (1951-1951).

KOKOMOOR, FRANKLIN WESLEY, Ph.D. (Michigan), Professor of Mathematics and Astronomy and Head of Department (1927-1951).

KOLARIK, JOSEPH MILAN, Ph.D. (Pittsburgh), Associate, Psychological Clinic; Assistant Professor of Psychology (1956-1956).

KOO, ROBERT CHUNG JEN, Ph.D. (Florida), Interim Assistant Biochemist, Citrus Experiment Station (1953-1953).

KOPP, EDGAR WILLIAM, M.S.I.E., Assistant Professor of Industrial Engineering (1955-1955).

KORUTURK, SADI SABIT, M.A.Arch., Associate Professor of Architecture (1947-1956).

KOSTYK, JUNE, B.S. in L.S., Assistant in Library, Reference and Bibliography (1955-1955).

KRASTIN, KARL, J.S.D. (Yale), Professor of Law (1948-1954).

KREIDBERG, MARVIN ARNOLD, B.S.B.A., Colonel, Infantry, Professor of Military Science and Tactics (1955-1956).

KRETSCHMER, ALBERT EMIL, Ph.D. (Rutgers), Assistant Agronomist, Everglades Experiment Station (1952-1952).

KRIENKE, WALTER ALBERT, M.S., Associate Professor of Dairy Husbandry and Associate Dairy Technologist, Agricultural Experiment Station (1946-1946).

KROMP, CARL MATHEW, M.S.I.E., Assistant Professor of Industrial Engineering and Assistant Research Professor, Engineering and Industrial Experiment Station (1952-1952) (On leave 1956-1957).

KRUMM, ROGER VINCENT, M.A., Assistant in Library in Charge of Chemistry-Pharmacy Library (1951-1951).

KUITERT, LOUIS CORNELIUS, Ph.D. (Kansas), Entomologist, Agricultural Experiment Station (1948-1955).

KURTH, ARTHUR LINCOLN, Ph.D. (Yale), Associate Professor of French (1947-1954).

KURTZ, ALBERT K., Ph.D. (Ohio State), Professor of Psychology (1953-1953).

KURTZROCK, GEORGE HENRY, Ph.D. (Illinois), Assistant Professor of Speech; Associate, Speech and Hearing Clinic (1956-1956).

LACKEY, ELSIE WATTIE, M.S., Interim Assistant in Bacteriology (1956-1956).

LACKEY, JAMES BRIDGES, Ph.D. (Columbia), Professor of Sanitary Science and Research Professor, Engineering and Industrial Experiment Station (1952-1952).

LAESSLE, ALBERT MIDDLETON, Ph.D. (Florida), Associate Professor of Biology (1942-1956).

Lafferty, Donald Lee, Ph.D. (Kentucky), Assistant Professor of Physics (1955-1955).

Lagasse, Felix Scott, Ph.D. (Maryland), Horticulturist, U.S.D.A., Agricultural Experiment Station (1939-1939).

Laird, Dorothy Stephens, Ed.D. (Florida), Associate Professor of Education (1947 [44-45] 1956).

Lake, Noel Reese, B.S.A., Superintendent of Grounds (1955-1955).

Land, Warren Alonzo, M.Ed., Teacher, P. K. Yonge Laboratory School (1955-1955).

Lane, David, Ph.D. (Columbia), Associate Professor of Education; Associate, Psychological Clinic (1954-1954).

Lang, Gaines Barrett, Ph.D. (Illinois), Associate Professor of Mathematics (1942-1949).

Langford, Allie Gerald, M.A., Instructor in English (1953-1953).

Langston, Clarence Ambers, B.S.E.E., Assistant in Research, Engineering and Industrial Experiment Station (1956-1956).

Lanham, James Samuel, Ph.D. (Texas), C.P.A., Professor of Accounting and Head of Department (1947-1947).

Lankford, Samuel R., Trainer, Intercollegiate Athletics (1950-1950).

Large, John Runyon, M.S., Associate Plant Pathologist, Pecan Investigation Laboratory (1949-1949).

Larrick, Thomas, M.Arch., A.I.A., Architect, Professor of Architecture (1946-1946).

Larsen, Merwin John, Ph.D. (Iowa), Professor of Electrical Engineering and Head of Department (1951-1951).

Lasley, Marion Murray, Ph.D. (Columbia), Associate Professor of Spanish (1956-1956).

Lassiter, Roy Leland, M.Ag., Interim Instructor in Economics (1955-1955).

Latour, Marinus Henry, M.S.E.E., Associate Professor of Electrical Engineering and Associate Research Professor, Engineering and Industrial Experiment Station (1946-1956).

Lauter, Werner M., Ph.D. (Griefswald), Professor of Pharmaceutical Chemistry (1950-1950).

Lawrence, Fred Parker, M.Ag., Citriculturist, Agricultural Extension Service (1947-1947).

Lawrenson, Raymond Earl, M.M., Associate Professor of Music (1948-1948).

Lawson, Stanton Clowes Davison, M.S., Associate Professor of Engineering Mechanics (1947-1947).

Layne, James Nathaniel, Ph.D. (Cornell), Assistant Professor of Biology (1955-1955).

Lear, William Edward, Ph.D. (Florida), Associate Professor of Electrical Engineering and Associate Research Professor, Engineering and Industrial Experiment Station (1949-1954).

Leavitt, Benjamin Burton, Ph.D. (Harvard), Associate Professor of Biological Sciences (1946-1954).

Leavitt, Norma Muriel, Ed.D. (Columbia), Professor of Physical Education and Head, Department of Physical Education for Women (1953-1953).

Ledin, Robert Bruce, Ph.D. (Indiana), Assistant Horticulturist, Subtropical Experiment Station (1951-1951).

Lee, Permillas Arten, M.A., Assistant Professor of Physical Education (1948-1951).

Lee, Robert Charles, Ph.D. (Peabody), Associate Professor of English (1947-1956).

Leendertse, Jan Jacob, Diploma of Civil-Engineer (Holland), Assistant in Research, Engineering and Industrial Experiment Station (1956-1956).

Lehman, Eugene H., M.A., Interim Assistant Professor of Mathematics (1955-1955).

Leibman, Kenneth C., Ph.D. (New York), Instructor in Pharmacology, College of Medicine (1956-1956).

Leighty, Ralph George, B.S., Associate Soil Surveyor, Agricultural Experiment Station (1947-1956).

Leilich, Roy Edgar, Re.D. (Indiana), Assistant Professor of Professional Physical Education and Recreation (1952-1952).

Lemasters, Treva J., B.S., Research Assistant, Cancer Research Laboratory (1955-1955).

Leonard, Chester D., Ph.D. (Rutgers), Associate Horticulturist, Citrus Experiment Station (1950-1950).

Leps, Joseph McElroy, Ed.D. (Columbia), Professor of Education (1943-1945).

Lewis, Edward Haskell, M.A., Associate Professor of Mechanical Engineering (1951-1955).

Lewis, Hal Graham, Ph.D. (Columbia), Professor of Education (1944 [36-41] 1944).

Lewis, Howard Kenneth, E.E., Associate Professor of Mathematics; Counselor (1946-1955).

Lewis, Katherine P., B.A., Captain, Assistant Professor of Air Science (1956-1956).

Liggett, Helen Roberts, M.A., Interim Instructor in Education (1956-1956).

Liles, Annette Lucille, B.S. in L.S., M.A., Assistant Librarian and Interim Head, Reference and Bibliography Department (1947-1956).

Lincoln, Francis Busy, Ph.D. (California), Horticulturist, Subtropical Experiment Station (1947-1947).

Lipscomb, Ralph Waldo, M.S., Associate Agronomist, North Florida Experiment Station (1944-1944).

Little, Samuel Jones, M.B.A., Major, Assistant Professor of Air Science (1952-1952) (Resigned August 20, 1956).

Little, Winston Woodard, M.A., Dean of the University College and Professor of Logic (1931-1937).

Lofton, William Travis, M.A.E., Associate Professor of Agricultural Education (1937-1947).

Loftus, Richard Joseph, M.A., Instructor, News Education, General Extension Division (1955-1955).

Loggins, Phillip Edwards, M.S., Assistant Professor of Animal Husbandry and Assistant Animal Husbandman, Agricultural Experiment Station (1953-1956).

Lorz, Albert Protus, Ph.D. (Virginia), Professor of Vegetable Crops and Horticulturist, Agricultural Experiment Station (1948-1948).

Lounsbury, John Horton, Ed.D. (Peabody), Assistant Professor of Education (1956-1956).

Lowe, John W., Ph.D. (Florida), Instructor in Economics (1953-1953) (Resigned August 31, 1956).

Lucas, Eleanor Simons, B.S. in L.S., Assistant in Library, Technical Processes (1950-1950).

Luke, Herbert Hodges, Ph.D. (Louisiana State), Plant Pathologist, U.S.D.A., Agricultural Experiment Station (1955-1955).

Lundy, Hosea Willis, B.S.A., Associate Agronomist in Charge, Suwannee Valley Experiment Station (1946-1955).

Lupkiewicz, Joseph Vincent, M.M., Associate Professor of Music (1948-1948).

Lutrick, Monroe Cornealous, Ph.D. (Ohio State), Assistant Agronomist, West Florida Experiment Station (1956-1956).

Lyons, John O., M.S., M.A., Interim Assistant in Library and Interim Instructor in Library Science (1956-1956).

Lytle, Andrew Nelson, B.A., Lecturer in English (1948-1948).

Lytle, Ernest James, M.A., Instructor in Mathematics (1946-1946) (Resigned September 4, 1956).

MacCurdy, Robert Douglas, Ed.D. (Boston), Associate Professor of Education and Biological Sciences (1955-1955).

MacDonald, Lauchlin Donald, Ph.D. (Boston), Professor of Philosophy (1956-1956).

Macdonald, William Dickson, J.S.D. (Michigan), Professor of Law (1948-1951).

Maclachlan, John Miller, Ph.D. (North Carolina), Professor of Sociology and Anthropology and Head of Department; Analyst for Health Center (1938-1941).

Macleod, Malcolm Lorimer, Ph.D. (Virginia), Associate Professor of English (1946 [38-41; 42-44] 1947).

Magie, Robert Ogden, Ph.D. (Wisconsin), Plant Pathologist, Gulf Coast Experiment Station (1945-1945).

Mahon, John Keith, Ph.D. (California), Assistant Professor of History (1954-1954).

Malcolm, John Lowrie, Ph.D. (Rutgers), Associate Soils Chemist, Subtropical Experiment Station (1948-1948).

Malony, Frank Edward, LL.B., Professor of Law (1946-1951).

Manze, Michael, B.S., Major, Assistant Professor of Air Science (1956-1956).

Marchand, Hans, Ph.D. (Cologne), Associate Professor of Romance Languages (1956-1956).

Marcus, Robert Brown, Ed.D. (Florida), Instructor in Physical Sciences (1955-1955).

Maren, Thomas H., M.D. (Johns Hopkins), Professor of Pharmacology and Head of Department, College of Medicine (1955-1955).

Marshall, Sidney Paul, Ph.D. (Minnesota), Associate Professor of Dairy Husbandry and Associate Dairy Husbandman, Agricultural Experiment Station (1947 [42-45] 1947).

Martin, Samuel Preston, M.D. (Washington), Professor of Medicine and Head of Department, College of Medicine (1956-1956).

Martinson, Earl Pehr, M.A., Professor of Industrial Engineering and Head of Department (1948-1949).

Mase, Darrel Jay, Ph.D. (Columbia), Professor of Education and Speech; Coordinator, Florida Center of Clinical Services (1950-1950).

Mason, Bruce Bonner, Ph.D. (Texas), Assistant Professor of Political Science (1954-1954).

Massey, Hal, M.Ed., Interim Instructor in Education (1955-1955).

Mathews, Blair H., M.S., Resident Advisor, Men's Residence Halls (1956-1956).

Matthews, Charles Arnold, Ph.D. (Virginia), Professor of Finance (1948-1955).

Mauderli, Max Otto, Ph.D. (Pennsylvania), Associate Professor of German (1948-1954).

Mauer, John W., B.S., Basketball Coach and Assistant Football Coach (1951-1951).

Mautz, Robert Barbeau, LL.B., Assistant Dean of the College of Law and Professor of Law (1950-1955).

Maxfield, John Wesley, M.A., Assistant Preparator, Florida State Museum (1954-1954).

May, Frank Pierce, B.Ch.E., Instructor in Chemical Engineering and Assistant in Research, Engineering and Industrial Experiment Station (1955-1955).

Mayberry, Maurice E., B.S.B.A., Placement Officer, Student Personnel (1953-1953).
McAlister, Lyle N., Ph.D. (California), Associate Professor of History (1950-1955).
McBride, Joseph James, Ph.D. (Delaware), Assistant Chemist, Citrus Experiment Station (1954-1954).
McCachren, James Roland, M.A., Assistant Professor of Physical Education; Freshman Basketball Coach (1946-1946).
McCaleb, John Earl, Ph.D. (Texas A&M), Assistant Agronomist, Range Cattle Experiment Station (1955-1955).
McCall, John Temple, M.S., Assistant in Chemistry, Animal Husbandry, Agricultural Experiment Station (1951-1951) (On leave first semester 1956-1957).
McChesney, William Wallace, M.D. (Virginia), University Physician (1949-1949).
McClellan, Margaret Cave, M.A., Instructor in Speech; Associate, Speech and Hearing Clinic (1948-1951) (On leave 1956-1957).
McClelland, Hayes K., M.A., Assistant Dean of Men (1949-1954).
McCloud, Darrell Edison, Ph.D. (Purdue), Associate Agronomist, Agricultural Experiment Station (1948-1954).
McClure, Edward E., B.Arch., Instructor in Architecture (1955-1955).
McCornack, Andrew Adam, M.S., Collaborator, Citrus Experiment Station (1953-1953).
McCown, Jack Thomas, M.Ag., Interim Assistant Horticulturist, Agricultural Extension Service (1951-1951).
McCoy, Charles Sherwood, B.D., Assistant Professor of Religion (1954-1954).
McCoy, Francis Tyrone, LL.B., Law Librarian and Assistant Professor of Law (1955-1955).
McCracken, Janet May, Ph.D. (Ohio State), Associate Professor of Education (1947-1955).
McCubbin, Earl Noel, Ph.D. (Cornell), Horticulturist, Potato Investigations Laboratory (1940-1943).
McCutchen, Kathleen Anderton, M.A., Interim Instructor in Education (1955-1955).
McEachern, Floy McCall, M.A.E., Instructor in Education (1944-1950).
McElwee, Edgar Warren, Ph.D. (Ohio State), Professor of Ornamental Horticulture and Head of Department; Horticulturist and Head of Department, Agricultural Experiment Station and Agricultural Extension Service (1953-1956).
McEntee, William James, M.Ed., Assistant Professor, P. K. Yonge Laboratory School (1952-1953).
McFadden, Lorne Austin, Ph.D. (Cornell), Assistant Horticulturist, Subtropical Experiment Station (1956-1956).
McFadden, Samuel Edgar, Ph.D. (Virginia), Assistant Horticulturist, Agricultural Experiment Station (1950-1950).
McFerrin, John Berry, Ph.D. (North Carolina), Professor of Business Organization and Operation and Director of Graduate Studies (1937-1956).
McGuire, Vincent, Ed.D. (Florida), Associate Professor of Education (1947-1954).
McHughston, Richard Wallace, M.A., Interim Instructor in English (1955-1955).
McInnis, Sam W., M.A., Associate Professor of Mathematics (1930-1955).
McIntosh, Edward Roy, M.S. in L.S., Instructor in Journalism and Communications and Film Director, T.V. Production Center (1954-1954).
McIntosh, P. R., M.F.A., Professor of Art and Interim Head of Department (1949-1956).
McKinney, Georgia Coleman, B.Ed., Interim Instructor in Family Life (1956-1956).

McLendon, Ida Ruth, Ph.D. (Ohio State), Associate Professor of Education (1936-1956).

McMullen, Kenneth Smith, M.Ag., District Agent, Agricultural Extension Service (1935-1946).

McNairy, Alice Hall, M.L., Assistant in Library, Acquisitions (1953-1953).

McNary, Robert Reed, Ph.D. (Cincinnati), Collaborator, Citrus Experiment Station (1951-1951).

McPherson, William Kenneth, M.S., Professor of Agricultural Economics and Agricultural Economist, Agricultural Experiment Station (1951-1951).

McQuitty, John Vredenburgh, Ph.D. (Kentucky), University Examiner (1929-1935).

McVoy, James David, B.Arch., A.I.A., Associate Professor of Architecture (1948-1951).

Meacham, Robert Colgrove, Ph.D. (Brown), Associate Professor of Mathematics (1954-1954).

Means, Ralph Eugene, B.S., Lt. Colonel, Artillery, Assistant Professor of Military Science and Tactics (1954-1954).

Mehrhof, Norman Ripley, M.Ag., Professor of Poultry Husbandry and Head of Department; Poultry Husbandman and Head of Department, Agricultural Experiment Station and Agricultural Extension Service (1924-1949).

Mercer, Norman A., M.A., Assistant Professor of Economics (1953-1956).

Meyer, Axel, Ph.D. (Illinois Institute of Technology), Assistant Professor of Physics (1955-1955).

Meyer, Harvey Kessler, Ed.D. (Florida), Professor of Education (1946-1952).

Meyer, Herbert Albert, Ph.D. (Iowa), Professor of Mathematics; Director, Statistical Laboratory (1946-1952).

Miklos, John Edward, LL.B., Associate Professor, Public Service Training Center, General Extension Division (1951-1956).

Miles, Jeanne Elise, M.A., Interim Instructor in Speech (1956-1956).

Millar, Jane Carree, M.A., Assistant Professor of Physical Education (1948-1952).

Miller, Clyde Joseph, M.A., B.S. in L.S., Instructor in Humanities (1954-1954).

Miller, Howard Nile, Ph.D. (California), Plant Pathologist, Agricultural Experiment Station (1948-1955).

Miller, James W., M.S.F., Professor of Logging and Lumbering (1937-1951).

Miller, William Henry, M.S.A.E., Associate Professor of Aeronautical Engineering (1955-1955).

Millican, Charles Norman, Ph.D. (Florida), Assistant Professor of Economics and Assistant Dean, College of Business Administration (1949-1956) (Resigned November 1, 1956).

Mims, Bernice Ashburn, M.A., Associate Professor of Information and Service and Head of Department, General Extension Division (1946 [28-44] 1946).

Mitchell, Jean Oltman, M.A.E., Instructor in Education (1944-1950).

Mitchell, William Grant, M.A., Assistant Editor, Agricultural Experiment Station (1952-1952).

Mixon, Aubrey Clifton, M.S.A., Assistant Agronomist, Agricultural Extension Service (1953-1953).

Mooney, Ernest Gordon, M.P.E., Assistant Professor of Physical Education (1945-1956).

Moore, Alan Coningsby, M.Ed., Instructor in Physical Education (1953-1953).

Moore, Bernard H., B.A., Assistant Meteorologist, Weather Forecasting Service, U.S.D.A. (1935-1935).

Moore, Edwin Lewis, Ph.D. (Massachusetts State), Collaborator, Citrus Experiment Station (1951-1951).

Moore, James Francis, M.B.A., C.P.A., Assistant Professor of Accounting (1948-1953).

Moore, John T., Ph.D. (Chicago), Associate Professor of Mathematics and Astronomy (1953-1953).

Moore, Julian Stephen, M.S.A., Extension Poultryman, Agricultural Extension Service (1950-1950).

Moore, Theral Orvis, Ph.D. (Missouri), Assistant Professor of Mathematics (1955-1955).

Moore, William Edgar, Ph.D. (Peabody), Professor of Logic; Counselor (1946 [30-44] 1946).

Moore, William Irvin, Ed.D. (Florida), Instructor in Physical Sciences (1953-1953).

Moorhead, Edgar Hunter, B.A., Captain, Assistant Professor of Air Science (1952-1952) (Resigned September 17, 1956).

Moorman, John Haynes, Ph.D. (Iowa), Professor of Education and Head of Business Education (1940-1951).

Morales, Julio Alfredo, M.A., Instructor in Mathematics (1946-1946).

Morgan, George Beers, M.S., Assistant in Research, Engineering and Industrial Experiment Station (1955-1955).

Morgan, Hazel T., M.A., Instructor in Youth Activities, General Extension Division (1950-1950).

Morgan, James L., B.S., Tabulating Supervisor, Office of the Registrar (1956-1956).

Morgan, Marcellus, M.A., Vocational Appraiser, Veterans Guidance Center (1949-1949).

Morris, Alton Chester, Ph.D. (North Carolina), Professor of English (1927-1946).

Morrison, Jay Alfred, M.S., Teacher-Trainer in Trade and Industrial Education (1956-1956).

Mossy, Roy Joseph, B.S., Captain, Infantry, Assistant Professor of Military Science and Tactics (1954-1954).

Mott, Paul A., Assistant Meteorologist, Weather Forecasting Service, U.S.D.A. (1956-1956).

Mounts, Charles Eugene, Ph.D. (Duke), Associate Professor of English (1927-1945).

Moxley, Clisby Carey, Ph.D. (Kentucky), Associate Economist, Agricultural Extension Service (1955-1955).

Muehlner, Felix, U.J.D. (Frederick William, Germany), Associate Research Professor, Bureau of Economic and Business Research (1950-1950).

Mull, Leon Edmund, Ph.D. (Iowa State), Professor of Dairy Manufacturing and Dairy Technologist, Agricultural Experiment Station (1940-1956).

Muller, Albert Stanley, B.S., Professor of Plant Pathology and Counselor of Latin-American Agricultural Students (1952-1952).

Muma, Martin Hammond, Ph.D. (Maryland), Associate Entomologist, Citrus Experiment Station (1951-1951).

Mundy, Belvey Washington, Ph.D. (Indiana), Associate Professor of Physical Sciences and Chemistry (1955-1956).

Muntyan, Bozidar, M.S., Assistant Professor of Education (1953-1953).

Murphey, Milledge, Ph.D. (Oklahoma A&M), Associate Professor of Entomology (1947-1953).

Murphree, Albert Alexander, B.A. (Oxon.), Associate Professor of English (1934-1955).

MURPHREE, CLAUDE LEON, B.A., Professor of Music (1925-1948).

MURPHREE, CLYDE ELWYN, M.S.A., Farm and Home Development Specialist, Agricultural Extension Service (1951-1955).

MURPHY, JOHN LEO, M.A., Assistant in Research, Engineering and Industrial Experiment Station (1955-1955).

MURRAY, LESSIE L., Ed.D. (Florida), Assistant Professor of Education (1953-1953).

MUSCHLITZ, EARL EUGENE, Ph.D. (Pennsylvania State), Associate Professor of Electrical Engineering and Associate Research Professor, Engineering and Industrial Experiment Station; Associate Professor of Chemistry (1951-1953).

MYERS, FORREST EARL, M.Ag., Assistant Vegetable Crop Specialist, Agricultural Extension Service (1948-1948).

MYERS, FRANCIS COLVILLE, M.A., Assistant Professor of Mathematics (1956-1956).

MYERS, JULIAN MOSTELLA, M.S.A., Associate Agricultural Engineer, Agricultural Experiment Station (1947-1947).

MYERS, ROBERT BROWN, Ed.D. (Florida), Associate Professor of Education (1952-1955).

MYHRE, DONALD LAVERNE, Ph.D. (Wisconsin), Assistant Soils Chemist, Potato Investigations Laboratory (1953-1953).

NACHENBERG, SAMUEL, M.M., Instructor in Music (1953-1953).

NAGLE, FRANCIS JOSEPH, M.A., Assistant Professor of Professional Physical Education (1956-1956).

NASH, WILLIAM ARTHUR, Ph.D. (Michigan), Professor of Engineering Mechanics and Research Professor, Engineering and Industrial Experiment Station (1954-1956).

NAWROCKI, PAUL JOHN, M.A. Associate Research Professor, Engineering and Industrial Experiment Station (1956-1956).

NEAL, RUTH, M.A., Head Resident, Women's Residence Halls (1953-1954).

NEALE, JAMES RALPH, Ed.D. (Columbia), Assistant Professor of English (1946-1954).

NECHAY, BOHDAN ROMAN, D.V.M. (Minnesota), Post-doctoral Fellow in Pharmacology, College of Medicine (1956-1956).

NEFF, THOMAS O'NEIL, M.S.E.E., Associate Professor of Engineering Mechanics (1946-1952).

NEIDHARDT, CARL RICHARD, M.F.A., Assistant Professor of Art (1952-1955).

NELLER, JOSEPH ROBERT, Ph.D. (Rutgers), Soils Chemist, Agricultural Experiment Station (1930-1932).

NELMS, BYRON J., M.A., Teacher-Trainer in Trade and Industrial Education (1954-1954) (Resigned September 15, 1956).

NETTLES, VICTOR FLEETWOOD, Ph.D. (Cornell), Associate Horticulturist, Agricultural Experiment Station (1938-1951).

NEUBAUER, GERHARDT W. F., M.S., Assistant Professor of Education (1948-1948).

NEWBILL, MICKIE, M.F.A., Instructor in Journalism and Communications and Program Director, Radio Production Center (1956-1956).

NEWHALL, WILLIAM FREEMAN, Ph.D. (Byrn Mawr), Assistant Biochemist, Citrus Experiment Station (1952-1952).

NIELAND, LOUIS THEODORE, Farm Forester, Agricultural Extension Service (1938 [14-17] 1938).

NOBLE, ROBERT VERNON, M.A., Assistant Professor of Extension Classes and Workshops, General Extension Division (1950-1956).

NOLAN, WILLIAM JOHN, Ph.D. (Michigan), Professor of Chemical Engineering and Research Professor, Engineering and Industrial Experiment Station (1946-1949).

NOLTING, JOHN PAUL, M.S., Interim Assistant Professor of Physical Sciences (1955-1956).

NOONAN, JOHN CLEMENT, M.S., Assistant Horticulturist, Subtropical Experiment Station (1951-1951).

NORMAN, OSCAR NEWTON, B.S., Assistant Meteorologist, Weather Forecasting Service, U.S.D.A. (1941-1941).

NORRIS, DALE MELVIN, Ph.D. (Iowa State), Assistant Entomologist, Potato Investigations Laboratory (1956-1956).

NORTHRUP, FLOYD LORRAIN, M.S., District Supervisor, Agricultural Education (1948-1948).

NORTON, JOHN STANLEY, M.S., Assistant Agricultural Engineer, Agricultural Experiment Station (1951-1951).

NORTON, JOSEPH DANIEL, M.S., Assistant Vegetable Crop Specialist, Agricultural Extension Service (1954-1954).

NULTON, LUCY, M.A., Instructor, P. K. Yonge Laboratory School (1950-1954).

NUTTER, GENE CARLTON, Ph.D. (Cornell), Assistant Turf Technologist, Agricultural Experiment Station (1951-1951).

NUTTER, HAZEN EDWARD, M.A., Associate Professor of Education and Head of Materials of Instruction (1938-1950).

O'BYRNE, JOSEPH MICHAEL, M.S.M.E., Assistant Professor of Mechanical Engineering and Assistant Research Professor, Engineering and Industrial Experiment Station (1953-1953) (Resigned October 7, 1956).

ODOR, DOROTHY LOUISE, Ph.D. (Rochester), Assistant Professor of Anatomy, College of Medicine (1956-1956).

OLIVER, CLIFTON, M.A., Assistant Professor of Personnel Management and Director of Placement Service for the College of Business Administration (1946-1948).

OLIVER, JAMES WILLARD, Ph.D. (Harvard), Associate Professor of Philosophy (1949-1953).

OLSEN, GEORGE LIEBERG, M.A., Assistant in Library, Technical Processes (1949-1949).

OLSEN, ROBERT WINTHROP, B.S., Biochemist, Citrus Experiment Station (1947-1947).

OLSEN, CLARA MCDONALD, Ph.D. (Peabody), Professor of Education (1934-1952) (On leave 1956-1957).

OLSEN, JAMES ALLEN, Ph.D. (Harvard), Assistant Professor of Biochemistry, College of Medicine (1956-1956).

OMER, GUY CLIFTON, Ph.D. (California Institute of Technology), Professor of Physical Sciences and Physics (1955-1955).

OPP, CARL BRADEN, B.A., Head, Off-Campus Housing (1940-1955).

ORAS, ANTS, B.Litt. (Oxon.), Professor of English (1949-1949).

ORMOND, WILLIAM NEWMAN, M.A., Assistant Professor of English (1948-1956).

OSBORN, GEORGE COLEMAN, Ph.D. (Indiana), Professor of Social Sciences (1947-1955).

O'STEEN, ALVA WOODROW, B.S.A., Supervisor, Florida National Egg Laying Test, Agricultural Extension Service, Chipley (1941-1945).

OSTERBIND, CARTER CLARKE, Ph.D. (American), Research Professor, Bureau of Economic and Business Research (1950-1956).

OTIS, ARTHUR B., Ph.D. (Brown), Professor of Physiology and Head of Department, College of Medicine (1956-1956).

OTTE, BURTON J. H., M.S., Curator of Chemistry (1925-1925).

Outler, Jason Curry, M.S.A., Assistant in Chemistry, Animal Husbandry, Agricultural Experiment Station (1953-1953).

Overman, Amegda Jack, M.S., Assistant Soils Microbiologist, Gulf Coast Experiment Station (1951-1956).

Owen, John Hinsey, Ph.D. (Wisconsin), Associate Professor of Plant Pathology (1949-1952).

Owens, James Bacot, B.S., Agricultural Statistician, U.S.D.A., Agricultural Experiment Station (1945-1945).

Ozaki, Charles Takeo, Ph.D. (Ohio State), Assistant Chemist, Everglades Experiment Station (1953-1953) (Resigned July 31, 1956).

Ozaki, Henry Yoshio, Ph.D. (Cornell), Assistant Horticulturist, Everglades Experiment Station (1954-1954).

Ozell, Alan Munci, Ph.D. (Illinois), Professor of Civil Engineering and Research Professor, Engineering and Industrial Experiment Station (1954-1956).

Pace, James Edward, M.S.A., Associate Animal Husbandman, Agricultural Extension Service (1942-1955).

Page, Ralph Emerson, Ph.D. (Syracuse), Dean of the College of Arts and Sciences and Professor of Political Science (1948-1948).

Pait, James Albert, Ph.D. (Virginia), Associate Professor of Logic (1952-1952).

Palmer, Arno Zane, Ph.D. (Missouri), Associate Professor of Animal Husbandry and Associate Animal Husbandman, Agricultural Experiment Station (1955-1955).

Panos, Charles, Ph.D. (Pittsburgh), Interim Assistant Professor of Bacteriology (1956-1956).

Pardee, Mary Ruth, B.S. in L.S., Assistant in Library, Technical Processes, (1945-1945).

Park, John Faircloth, M.A., Instructor in Music (1956-1956).

Parkins, Ada Margaret, M.A., Interim Teacher, P. K. Yonge Laboratory School (1956-1956).

Parkins, Ivan Worth, Ph.D. (Chicago), Assistant Professor of Social Sciences (1955-1955).

Parramore, Willie E., B.A.A., Instructor in Extension Art, Display and Design, General Extension Division (1950-1950).

Parrish, Wayland Maxfield, Ph.D. (Cornell), Visiting Professor of Speech (1955-1955).

Parvin, Fayette Ward, M.S.A., Assistant to the Director, Agricultural Extension Service (1948-1951) (On leave 1956-1957).

Parvin, Philip Eugene, M.S., Assistant Professor of Ornamental Horticulture (1953-1953) (On leave 1956-1957).

Pate, Olen Basil, M.A., Teacher, P. K. Yonge Laboratory School (1952-1952).

Patrick, Rembert Wallace, Ph.D. (North Carolina), Professor of History (1940-1945).

Patrick, Roger, Ph.D. (Iowa State), Bacteriologist, Citrus Experiment Station (1952-1952).

Patterson, Elam Pusey, B.S.E., Assistant Professor of Mechanical Engineering and Assistant Research Professor, Engineering and Industrial Experiment Station (1952-1956).

Patterson, Paul Bryan, Ph.D. (Florida), Assistant Professor of Mathematics (1946 [43-44] 1954).

Patterson, Theodore William, M.C.P., Assistant Professor of Architecture (1952-1954) (On leave 1956-1957).

Patton, Iola Hill, M.A.H.E., Assistant Professor of Art (1956-1956).

Patton, Robert Hoover, Ph.D. (Florida), Assistant in Research, Engineering and Industrial Experiment Station (1955-1955) (Resigned August 15, 1956).

Paul, Ouida Fay, M.A., Assistant Professor of Music (1949-1949).

Payne, Ancil Newton, Ph.D. (Illinois), Associate Professor of History (1929-1945).

Payne, Henry Fleming, M.S., Research Professor, Engineering and Industrial Experiment Station (1955-1955).

Payne, Walter Arville, Ph.D. (Florida), Assistant Director, School of Inter-American Studies (1952-1952) (On leave 1956-1957).

Peabody, Kenneth Earl, M.F.A., Assistant Professor of Art (1950-1952).

Peacock, Fentress McCoughan, M.S., Assistant Animal Husbandman, Range Cattle Experiment Station (1952-1954).

Pearce, James Martine, Ph.D. (Florida), Assistant Professor of Chemistry (1952-1953).

Peeler, Ruth Beatrice, M.A., Instructor, P. K. Yonge Laboratory School (1934-1952).

Pendleton, William Clyde, M.A., Instructor in Social Sciences (1950-1950) (On leave 1956-1957).

Pennington, Clark William, C.E., Assistant Professor of Mechanical Engineering and Assistant Research Professor, Engineering and Industrial Experiment Station (1954-1954).

Penrod, John Arthur, Ph.D. (Pennsylvania), Assistant Professor of English (1950-1954).

Perdue, George Fred, B.E.E., Assistant in Research, Engineering and Industrial Experiment Station (1955-1955).

Perry, Franklyn Stanton, M.Ag., District Agent, Agricultural Extension Service (1946-1949).

Perry, Thomas Oliver, Ph.D. (Harvard), Assistant Professor of Forest Genetics (1952-1952).

Peterson, Erhart Gustaf, LL.B., M.B.A., Associate Professor of Accounting (1947-1949).

Peterson, William Wesley, Ph.D. (Michigan), Assistant Professor of Electrical Engineering and Assistant Research Professor, Engineering and Industrial Experiment Station (1956-1956).

Pettis, Aubrey Marshall, M.S.A., Farm Electrification Specialist and Assistant Agricultural Engineer, Agricultural Extension Service (1947-1951).

Phelps, George Osborn, M.S.M.E., Assistant Professor of Engineering Graphics (1945 [37-40] 1945).

Phillips, Arthur Minis, B.S., Associate Entomologist, Pecan Investigations Laboratory (1941-1948).

Phillips, Arthur R., B.S., Interim Instructor in Physics (1956-1956).

Phillipps, Wayland B., M.A., Instructor, P. K. Yonge Laboratory School (1948-1954).

Philpott, Frank Exell, M.A., Assistant Professor of Physical Education (1946-1946).

Phipps, Cecil Glenn, Ph.D. (Minnesota), Professor of Mathematics (1924-1943).

Pierce, Emory Lowe, Ph.D. (Florida), Professor of Biology and Supervisor of Marine Laboratory (1945-1955).

Piercy, John Edward, B.Arch., Instructor in Architecture (1955-1955).

Pieringer, Arthur Paul, Ph.D. (Cornell), Assistant Horticulturist, Citrus Experiment Station (1956-1956).

PIERSON, WILLIAM HASKELL, Ph.D. (Chicago), Associate Professor of Geography (1946-1946).

PILTZ, ALBERT, Ed.D. (Florida), Assistant Professor of Education (1954-1954) (Resigned August 24, 1956).

PIRENIAN, ZAREH MEGUERDITCH, M.S., Associate Professor of Mathematics (1931-1937).

PIRKLE, EARL C., Ph.D. (Cincinnati), Assistant Professor of Physical Sciences and Geology (1950-1950).

PITTS, EDITH PATTI, Administrative Assistant to the President (1937-1937).

PLATT, WILLIAM J., M.S.A., District Agent, Agricultural Extension Service (1936-1953).

POLLARD, CASH BLAIR, Ph.D. (Purdue), D.Sc., Professor of Chemistry (1930-1937).

POOLE, LEWIS ALBERT, M.S., Assistant Professor of Physical Sciences (1947-1955).

POOLE, REID, M.A., Associate Professor of Music (1949-1955).

POOR, RUSSELL SPURGEON, Ph.D. (Illinois), Provost, Health Center (1952-1953).

POORE, WILLIAM DEAN, M.A., Assistant Director, Employee Personnel Services (1953-1953).

POPE, BARNA CLEVELAND, B.S., Major, Assistant Professor of Air Science (1954-1954).

POST, DON MCKENZIE, M.S.F., Assistant Professor of Forestry (1951-1955).

POTTER, ROBERT ELMER, Ed.D. (Illinois), Assistant Professor of Education (1955-1955).

POTTER, WILLIAM MELVILLE, M.A., Assistant Professor of Physical Education and Tennis Coach (1946-1946).

POTTORF, MARY ELIZABETH, M.A., Head Resident, Women's Residence Halls (1956-1956).

POWELL, GARLAND WHEELER, Director of Radio Station WRUF (1929-1930) (Retired October 31, 1956).

POWELL, LEVI ALLEN, M.S.A., Assistant Agricultural Economist, Agricultural Experiment Station (1952-1952).

POWELL, ROBERT D., Ph.D. (Iowa State), Associate Professor of Botany (1949-1956).

POWERS, SAMUEL RALPH, Ph.D. (Minnesota), Interim Professor of Education (1956-1956).

PRATT, DARRELL BRADFORD, Ph.D. (Harvard), Associate Professor of Bacteriology (1953-1956) (On leave 1956-1957).

PRATT, ROBERT MARSHALL, Ph.D. (Cornell), Associate Entomologist-Pathologist, Citrus Experiment Station (1950-1950).

PREODOR, EDWARD C., B.M., Professor of Music (1948-1955).

PRICE, JOSEPH EDWIN, B.A.E., Professor of Social Sciences (1931-1956).

PRICE, THOMAS JAMES, Comptroller (1927-1947).

PRICE, WILLIAM CONWAY, Ph.D. (Columbia), Virologist, Citrus Experiment Station (1954-1954).

PRIEM, ERVIN SAMUEL, B.S.E.E., Assistant Research Professor, Engineering and Industrial Experiment Station (1952-1952).

PRINCE, VIVIAN CHRISTINE, M.S. in L.S., Associate Librarian and Head of Technical Processes Department; Associate Professor of Library Science (1943-1952). (On leave 1956-1957).

PRITCHETT, WILLIAM LAWRENCE, Ph.D. (Iowa State), Soil Technologist, Agricultural Experiment Station (1953 [48-50] 1953).

PROCTOR, SAMUEL, M.A., Assistant Professor of Social Sciences (1946-1949).

PROPHET, WALLACE WILLIAM, M.A., Instructor in Psychology (1953-1953).

PRUITT, CHARLES WILLIAM, B.S.B.A., Assistant in Administration, Health Center (1955-1955).

PUMPHREY, FRED HOMER, E.E., Professor of Electrical Engineering (1946-1946).

Purser, Stuart Robert, M.F.A., Professor of Art (1951-1951).

Putman, Ivan J., Ph.D. (Columbia), Adviser to Foreign Students (1952-1952).

Putnam, Frank William, Ph.D. (Minnesota), Professor of Biochemistry and Head of Department, College of Medicine (1955-1955).

Pye, Malcolm L., Ph.D. (Illinois), C.P.A., Assistant Professor of Accounting (1955-1955).

Pye, Ruby Lee, M.A., Assistant Professor of Physical Education (1949-1954).

Pyle, Gordon Bruce, M.A.E., Instructor in Social Sciences (1956 [50-51] 1950).

Pyles, Thomas, Ph.D. (Johns Hopkins), Professor of English (1948-1948) (On leave 1956-1957).

Quackenbush, Orville F., Ph.D. (Minnesota), Associate Professor of Social Sciences (1955 [41-42; 46-51] 1946).

Qualls, LeRoy Lillard, Ph.D. (Illinois), Assistant Professor of Economics (1948-1948).

Rakove, Milton L., Ph.D. (Chicago), Interim Assistant Professor of Social Sciences (1956-1956).

Ramirez, Adolfo, Ph.D. (Wisconsin), Assistant Professor of Spanish (1948-1956).

Ramsey, James Cain, Ph.D. (Florida), Associate Research Professor, Engineering and Industrial Experiment Station (1953-1953).

Randolph, John Willoughby, M.S., Agricultural Engineer, Everglades Experiment Station (1947-1947).

Rappenecker, Casper, Ph.D. (Cornell), Associate Professor of Geology and Physical Sciences (1949-1949).

Ray, Delmas Dennis, Ph.D. (Florida), Associate Professor of Accounting (1948-1956).

Ray, Francis Earl, D.Sc. (Oxon.), Director of Cancer Research Laboratory and Research Professor of Cancer Research (1949-1949).

Ray, Howard Eugene, Ph.D. (Minnesota), Assistant Soils Chemist, Everglades Experiment Station (1956-1956).

Raymond, Walter, B.Arch., Associate Professor of Architecture (1956-1956).

Ream, Evert E., B.A., Lt. Colonel, Infantry, Assistant Professor of Military Science and Tactics (1953-1953).

Reaves, Clarence William, M.S.A., Dairy Husbandman, Agricultural Extension Service (1947-1947).

Reaves, Jack Sheldon, B.S.B.A., Director of Purchasing (1948-1948).

Reddish, Robert Lee, Ph.D. (Texas A&M), Assistant Animal Industrialist, Agricultural Extension Service (1955-1955).

Redmond, James R., Ph.D. (California), Assistant Professor of Biology (1956-1956).

Reed, John Clifford, M.E., Professor of Mechanical Engineering and Head of Department (1950-1950).

Reed, Thomas McKennan, Ph.D. (Pennsylvania State), Associate Professor of Chemical Engineering and Associate Research Professor, Engineering and Industrial Experiment Station (1952-1956).

Reeves, Frank Blair, M.A.Arch., Assistant Professor of Architecture (1949-1952).

Rehling, Conrad Henry, M.Ed., Assistant Professor of Physical Education and Golf Coach (1949-1952).

Reichert, Stanley Orville, D.Sc. (Colorado School of Mines), Assistant Research Professor, Engineering and Industrial Experiment Station (1956-1956).

Reid, Charles Edward, Ph.D. (Louisiana State), Associate Professor of Chemistry (1948-1955).

Reisinger, Richard Henry, M.P.H., Assistant Professor of Physical Education (1952-1956).

Reitz, Herman J., Ph.D. (Ohio State), Horticulturist in Charge, Citrus Experiment Station (1946-1957).

Reitz, J. Wayne, Ph.D. (Wisconsin), LL.D. (Tusculum), President of the University (1949 [34-44] 1955).

Rethlingshafer, Dorothy Adelaide, Ph.D. (North Carolina), Associate Professor of Psychology (1947-1947).

Reuss, Lawrence Adkins, M.S., Agricultural Economist, U.S.D.A., Agricultural Experiment Station (1954-1954).

Reynolds, Harry I., A.I.A., Associate Professor of Building Construction (1955-1955).

Reynolds, Mable Marie, M.A., B.S. in L.S., Assistant Librarian, Technical Processes and Assistant Professor of Library Science (1949-1955).

Rhoades, Winfred Carl, M.S., Entomologist in Charge, North Florida Experiment Station (1949-1952).

Rhoads, William Painter, M.Ed., Interim Instructor in Physics (1956-1956).

Rhudy, Ralph, Colonel, Professor of Air Science and Coordinator of Military Departments (1950-1954).

Rice, Walter Durant, B.S.F., Instructor in Forestry, State Ranger School (1955-1955).

Richards, Rowland, B.A., Entomologist, U.S.D.A., Agricultural Experiment Station (1956-1956).

Richardson, James Gilbert, M.A., Assistant Professor of Finance (1946-1949).

Richardson, Joe Byron, M.S., Assistant Professor of Agricultural Engineering and Assistant Agricultural Engineer, Agricultural Experiment Station (1954-1954).

Richart, Frank Edwin, Ph.D. (Illinois), Professor of Civil Engineering and Research Professor, Engineering and Industrial Experiment Station (1952-1954).

Riemer, William J., Ph.D. (California), Assistant Curator of Biological Sciences, Florida State Museum and Assistant Professor of Biology (1955-1955).

Riker, Harold Clark, Ed.D. (Columbia), Director of Housing (1938-1946).

Riley, Bert Clair, B.S.A., Dean of the General Extension Division (1919-1928).

Ring, Alfred A., Ph.D. (New York), M.A.I., Professor of Real Estate and University Appraiser (1947-1949).

Rion, William E., M.A., Director of Florida Union (1945-1948).

Ristic, Miodrag, D.V.M. (Hanover, Germany), Professor of Veterinary Science and Pathologist, Agricultural Experiment Station (1953-1956).

Ritchie, Alfred Ernest, M.S., Interim Instructor in Biochemistry, College of Medicine (1956-1956).

Robbins, Charles Lewis, M.S., Interim Instructor in History (1956-1956).

Roberts, Leonidas Howard, M.S., Assistant Professor of Physical Sciences (1949-1953).

Roberts, Merrill J., Ph.D. (Chicago), Professor of Economics and Transportation (1948-1955) (On leave 1956-1957).

Roberts, Norman Keith, M.S., Assistant Professor of Agricultural Economics and Assistant Economist, Agricultural Experiment Station (1954-1954).

Robertson, Alan J., M.A., Instructor in Economics and Assistant to the Dean, College of Business Administration (1956 [49-52] 1956).

Robertson, Charles Archibald, M.A., Litt.D. (University of the South), Professor of English and Head of Department (1922-1946).

Robertson, William Kitchener, Ph.D. (Purdue), Associate Chemist, Agricultural Experiment Station (1950-1956).

Robinson, Frank Albert, M.S., Assistant Apiculturist, Agricultural Experiment Station (1950-1950).

Robinson, Harvey Leigh, M.A., Assistant Football Coach (1955-1955).

Rockwood, Catherine Augusta, Ph.D. (Chicago), Associate Professor of Family Life and Head of Department (1952-1952).

Rockwood, William Peck, M.A., Major, Assistant Professor of Air Science (1954-1954).

Rodeck, Jean Helen, B.A., Interim Assistant Preparator, Florida State Museum (1956-1956).

Rodgers, Andrew Carroll, B.A.E., Assistant Director of Housing (1951-1955).

Rodgers, Earl Gilbert, Ph.D. (Iowa State), Associate Professor of Agronomy and Associate Agronomist, Agricultural Experiment Station (1946-1954).

Rogero, Kathryn Duggan, M.A. in L.S., Assistant in Library, Technical Processes (1956-1956).

Rogers, Clarence J., M.Ag., Assistant Professor of Agricultural Engineering (1953-1954).

Rogers, Frazier, M.S.A., Professor of Agricultural Engineering and Head of Department; Agricultural Engineer and Head of Department, Agricultural Experiment Station (1918-1923).

Rohde, F. Virginia, Ph.D. (Kentucky), Associate Professor of Mathematics (1950-1955).

Ronaldson, Agnes, M.S., Assistant Professor of Family Life and Child Development (1955-1955).

Rood, Nancy Neal, M.A., Director of Nursing Service, Teaching Hospital, Health Center (1956-1956).

Rose, Gillis Norman, B.S., Associate Agricultural Economist, Agricultural Experiment Station (1943-1945).

Rosé, Harold Cleland, B.Arch., Associate Professor of Architecture (1947-1956).

Rose, Sylvester Alexander, M.S., Assistant Ornamental Horticulturist, Agricultural Extension Service (1956-1956).

Rosenberger, Stanley Eugene, M.Ag., Assistant Vegetable Crop Specialist, Agricultural Extension Service (1949 [47-48] 1949).

Rosier, Nelson Eugene, B.E.E., Instructor in Electrical Engineering and Assistant in Research, Engineering and Industrial Experiment Station (1955-1955).

Rothwell, Donald Frederick, Ph.D. (Purdue), Assistant Professor of Soils (1948-1954).

Rouse, Alvin Hamilton, M.S., Associate Pectin Chemist, Citrus Experiment Station (1949-1949).

Rowe, Gene A., B.S.A., Agricultural Statistician, U.S.D.A., Agricultural Experiment Station (1955-1955).

Rubio, Michael Sanz, B.S., Education Specialist in Vocational Education (1955-1955).

Ruehle, George Dewey, Ph.D. (Washington State), Vice Director in Charge, Subtropical Experiment Station (1930-1944).

Ruelke, Otto Charles, Ph.D. (Wisconsin), Assistant Professor of Agronomy and Assistant Agronomist, Agricultural Experiment Station (1955-1955).

Ruff, William, Ph.D. (Yale), Professor of Humanities (1946-1955).

Ruprecht, Rudolph William, Ph.D. (Massachusetts State), Vice Director in Charge, Central Florida Experiment Station (1920-1920).

Russell, Donald Carver, B.S., Associate Meteorologist, Weather Forecasting Service, U.S.D.A. (1950-1950).

Ryan, James, Ph.D. (Wisconsin), Assistant Professor of Spanish (1953-1953) (Resigned September 5, 1956).

Ryan, John Edward, M.A., Assistant Professor of Physical Education and Swimming Coach (1949-1954).

Ryschkewitsch, George E., Ph.D., (Ohio State), Assistant Professor of Chemistry (1956-1956).

Sadler, Samuel Gould, Ed.D. (Florida), Associate Professor of Mathematics (1954-1954).

Salt, Ellis Benton, Ed.D. (New York), Professor of Professional Physical Education and Head of Department (1930-1946).

Sampson, Roger Williams, M.S., Associate Professor of Electrical Engineering and Associate Research Professor, Engineering and Industrial Experiment Station (1950-1954).

Samuel, John Alton, M.S.E., Assistant Professor of Mechanical Engineering and Assistant Research Professor, Engineering and Industrial Experiment Station (1954-1954).

Sandefur, Wayne Thomas, H.S.D. (Indiana), Associate Professor of Professional Physical Education (1953-1953).

Sanders, Dorsey Addren, D.V.M. (Kansas State), Professor of Veterinary Science and Head of Department; Veterinarian and Head of Department, Agricultural Experiment Station (1925-1949).

Sanford, Glen Murray, B.S., Captain, Assistant Professor of Air Science (1953-1953) (Resigned September 17, 1956).

Sarett, Alma Johnson, Ph.D. (Northwestern), Interim Assistant Professor of Speech (1955-1955).

Sashoff, Stephen Pencheff, M.S., Professor of Electrical Engineering and Research Professor, Engineering and Industrial Experiment Station (1932-1946).

Savage, Zach, M.S.A., Agricultural Economist, Agricultural Experiment Station (1931-1954).

Savell, Joel M., B.D., Resident Advisor, Men's Residence Halls (1956-1956).

Savige, John Laurence, M.Ed., Interim Instructor in Mathematics (1956-1956).

Sawicki, Eugene, Ph.D. (Florida), Assistant Research Professor of Cancer Research (1952-1952) (Resigned July 31, 1956).

Sawyer, Donald Albert, M.S.E., Instructor in Civil Engineering and Assistant in Research, Engineering and Industrial Experiment Station (1954-1954).

Sawyer, Earl M., M.S., Assistant Professor of Physics (1947-1953).

Sawyer, William Lincoln, M.S., Professor of Engineering Mechanics and Head of Department; Research Professor, Engineering and Industrial Experiment Station (1929-1949).

Scarborough, Earl Marvin, M.P.H., Interim Assistant Football Coach (1956-1956).

Scates, Douglas Edgar, Ph.D. (Chicago), Professor of Education and Consultant, Statistical Laboratory (1953-1953).

Schaeffer, Katherine, Ph.D. (Berlin), Assistant Research Professor, Cancer Research Laboratory (1956-1956).

Schaffer, Nile Clarett, Preparator, Florida State Museum (1942-1942).

Schenck, Norman Carl, Ph.D. (Illinois), Assistant Plant Pathologist, Watermelon and Grape Investigations Laboratory (1956-1956).

Schmertmann, John Henry, M.S.C.E., Assistant Professor of Civil Engineering and Assistant Research Professor, Engineering and Industrial Experiment Station (1956-1956).

Schmidt, Doris Theodotia, M.A., Associate Professor of Music (1949-1949).

Schneider, Nathan J., Ph.D. (Pittsburgh), Assistant Professor of Bacteriology (1954-1954).

Schnell, Herman Walker, M.A., Professor of Physical Education and Head, Department of Required Physical Education for Men (1946-1947).

Schoch, Wilfred Leroy, Superintendent of Construction (1935-1935).

Schoonmaker, Lucas Elmendorf, B.S.E.E., Associate Professor of Electrical Engineering (1947-1952).

Schotten, Glenn Franklin, B.S.A., Assistant Editor, Agricultural Experiment Station and Agricultural Extension Service (1956-1956).

Schrader, George Frederick, M.S.E., Assistant Professor of Electrical Engineering and Assistant Research Professor, Engineering and Industrial Experiment Station (1947-1953) (On leave first semester 1956-1957).

Schraemeyer, Constance DeMuth, M.A., Assistant Professor of Education (1956-1956).

Schroder, Vincent Nils, Ph.D. (Duke), Assistant Agronomist, Agricultural Experiment Station (1955-1955).

Schweyer, Herbert English, Ph.D. (Columbia), Professor of Chemical Engineering (1946-1950).

Scoles, Eugene Francis, S.J.D. (Columbia), Professor of Law (1949-1951) (On leave 1956-1957).

Scott, Linus Albert, M.S.M.E., Assistant Professor of Mechanical Engineering and Assistant Research Professor, Engineering and Industrial Experiment Station (1948-1952).

Scott, Thomas McDonald, M.A.E., Assistant Professor of Physical Education; Head, Adapted and Corrective Exercises Clinic (1949-1952).

Scudder, Delton Lewis, Ph.D. (Yale), Professor of Religion and Head of Department (1946-1946).

Scudder, Walter T., Ph.D. (Cornell), Associate Horticulturist, Central Florida Experiment Station (1955-1955).

Scully, Norbert John, Ph.D. (Chicago), Professor of Botany and Head of Department; Botanist and Head of Department, Agricultural Experiment Station (1955-1955) (Resigned September 6, 1956).

Seaberg, Lillian Marie, M.A., B.S. in L.S., Assistant Librarian, Reference and Bibliography (1949-1955).

Seale, Charles Colin, D.I.C.T.A., Associate Agronomist, Everglades Experiment Station (1945-1946).

Sears, William Hulse, Ph.D. (Michigan), Assistant Curator of Social Sciences, Florida State Museum (1955-1955).

Sebold, Howard Robinson, M.L.A., A.S.L.A., Professor of Landscape Architecture (1952 [48-49] 1955).

Segel, Harold Bernard, Ph.D. (Harvard), Assistant Professor of Slavic Languages (1955-1955).

Seil, Manning David, M.S., Associate Professor of Journalism and Communications (1953-1953).

Sellers, Frances Evelyn, M.A., Assistant Dean of Women (1949-1951).

Senn, Pettus Holmes, Ph.D. (Wisconsin), Professor of Agronomy and Head of Department (1929-1939).

Shaffer, Charles Vernon, B.E.E., Associate Research Professor, Engineering and Industrial Experiment Station (1946-1951).

Sharp, Bert Lavon, M.Ed., Instructor-Counselor in Education (1956-1956).

Sharpe, Miles Hervey, Ph.D. (Pennsylvania State), Assistant Editor, Agricultural Experiment Station and Agricultural Extension Service (1955-1955).

Sharpe, Ralph Harold, M.S., Associate Horticulturist, Agricultural Experiment Station (1948-1948).

Shaw, Bradford, B.S. in L.S., Assistant in Library in Charge of Chinsegut Hill Library (1955-1955) (Resigned October 31, 1956).

Shaw, Steven J., Ph.D. (New York), Assistant Professor of Marketing (1955-1955).

Shaw, Winfred Aldridge, M.S., Assistant Professor of Engineering Mechanics (1955-1955).

Shear, Cornelius Barrett, M.S., Plant Physiologist, U.S.D.A., Agricultural Experiment Station (1954-1954).

Sheehan, Thomas John, Ph.D. (Cornell), Assistant Ornamental Horticulturist, Agricultural Experiment Station (1954-1954).

Shelley, Dorothy Elizabeth, M.D. (Kansas), University Physician (1953-1953).

Shepard, Wayne Wiesman, M.A., Assistant Professor of Architecture (1953-1953).

Sherouse, Ray Truman, Assistant Meteorologist, Weather Forecasting Service, U.S.D.A (1935-1935).

Shields, Murray William, Ph.D. (Washington), Professor of Economics (1946-1949).

Shirley, Ray Louis, Ph.D. (Michigan State), Professor of Animal Husbandry and Nutrition; Biochemist, Agricultural Experiment Station (1953 [49-51] 1949).

Shoemaker, James Sheldon, Ph.D. (Minnesota), Horticulturist, Agricultural Experiment Station (1956-1956).

Shonbrun, Margaret Thomson, M.S., Instructor and Assistant in Youth Program, General Extension Division (1953-1953).

Shovar, Mark, B.A., Assistant Editor, Engineering and Industrial Experiment Station (1956-1956).

Showalter, Robert Kenneth, M.S., Horticulturist, Agricultural Experiment Station (1945-1956).

Shuford, David Marcus, B.Ch.E., Assistant in Research, Engineering and Industrial Experiment Station (1955-1955).

Sias, Frederick Ralph, B.E.E., Assistant in Research, Engineering and Industrial Experiment Station (1955-1955).

Siemieniewski, Andre, M.A., Instructor in Economics (1956-1956).

Sievers, Allen Morris, Ph.D. (Columbia), Professor of Economics (1954-1956).

Sikes, Anna Mae, M.S., State Home Demonstration Agent, Agricultural Extension Service, Tallahassee (1928-1950).

Silver, Warren Seymour, Ph.D. (Johns Hopkins), Interim Assistant Professor of Bacteriology (1956-1956).

Simanton, William Aldrich, Ph.D. (Iowa State), Entomologist, Citrus Experiment Station (1950-1950).

Simmons, Frank Robert, B.S.B.A., Captain, Artillery, Assistant Professor of Military Science and Tactics (1956-1956).

Simmons, Glenn Ballard, Ph.D. (Johns Hopkins), Professor of Education and Head of Off-Campus Instruction (1928-1949).

Simonds, John Day, M.S.M.E., Assistant Professor of Mechanical Engineering (1951-1952) (Resigned July 31, 1956).

Simons, John Norton, Ph.D. (California), Assistant Virologist, Everglades Experiment Station (1953-1953).

Simons, Joseph H., Ph.D. (California), Professor of Chemical Engineering; Research Professor and Coordinator of Fluorine Research, Engineering and Industrial Experiment Station (1950-1950).

Simpson, Charles Floyd, D.V.M. (Cornell), Associate Professor of Veterinary Science and Associate Veterinarian, Agricultural Experiment Station (1948-1948).

Sims, James Hylbert, M.A., Interim Instructor in English (1955-1955).

Sisler, Harry H., Ph.D. (Illinois), Professor of Chemistry and Head of Department (1956-1956).

Sites, John Wilbur, Ph.D. (Ohio State), Assistant Director and Horticulturist, Agricultural Experiment Station (1942-1955).

Skaggs, Allen Orrin, B.A.J., Editor, News Bureau (1942-1950).

Skinner, Thomas Cobb, M.Ag., Associate Agricultural Engineer, Agricultural Extension Service (1947-1953).

Skofield, Harriett Clark, M.A., Assistant Librarian, P. K. Yonge Library of Florida History and Interim Assistant Professor of Library Science (1945-1953).

Skoglund, Henry Leonard, M.A., Instructor in Logic (1955-1955).

Slagle, Dean, LL.B., Professor of Law (1924-1924).

Small, Kenneth F., Director, Radio Station WRUF (1956-1956).

Smith, Alexander G., Ph.D. (Duke), Professor of Physics (1948-1956).

Smith, Cecil Nuckols, M.A., Associate Agricultural Economist, Agricultural Experiment Station (1952-1952).

Smith, Charles Bassel, Ph.D. (Wisconsin), Professor of Mathematics (1946-1951).

Smith, Charles D., B.A., Assistant Professor of Economics (1956-1956).

Smith, David Barry, Sc.D. (Harvard), Professor of Civil Engineering and Research Professor, Engineering and Industrial Experiment Station (1949-1954) (On leave 1956-1957).

Smith, Dorothy Mary, M.Ed., Dean of the College of Nursing and Professor of Nursing (1956-1956).

Smith, Edward Frank, E.E., Associate Professor of Electrical Engineering (1928-1937).

Smith, Frederick Burean, Ph.D. (Iowa State), Professor of Soils and Head of Department; Microbiologist and Head of Department, Agricultural Experiment Station (1937-1944).

Smith, James Hunn, M.S.M.E., Assistant Professor of Engineering Graphics (1947-1952).

Smith, Joseph Gordon, M.A.E., District Supervisor, Agricultural Education (1943-1947).

Smith, Ralph Leslie, M.S., Associate Agronomist, West Florida Experiment Station (1943-1943).

Smith, Reynolds Belden, Ph.D. (New York State College of Forestry), Associate Professor of Wood Technology (1949-1949).

Smith, T. Lynn, Ph.D., (Minnesota), Professor of Sociology (1949-1949).

Smith, William Randall, B.S.A., Assistant Soil Surveyor, Agricultural Experiment Station (1955-1955).

Smith, Winston Oliver, Ph.D. (Purdue), Professor of Mechanical Engineering (1955-1955).

Snapp, Roy B., LL.M., Lecturer, Engineering and Industrial Experiment Station (1956-1956).

Snipes, Wilson Currin, M.A., Instructor in English (1954-1954).

Sobczyk, Andrew F., Ph.D (Princeton), Professor of Mathematics (1956-1956).

Soper, Daniel William, Ph.D. (Syracuse), P. K. Yonge School Psychologist and Assistant Professor of Education; Associate, Psychological Clinic (1952-1952).

Soule, Mortimer James, Ph.D. (Florida), Associate Professor of Fruit Crops (1956-1956).

South, Dudley Eugene, Ph.D. (Michigan), Professor of Mathematics (1952-1952).

Sowell, Grover, Ph.D. (Cornell), Assistant Plant Pathologist, Gulf Coast Experiment Station (1954-1954).

Spache, George Daniel, Ph.D. (New York), Head of Reading Laboratory and Clinic and Professor of Education and English (1950-1950).

Spangler, Byron Dement, M.S.E., Associate Professor of Civil Engineering and Associate Research Professor, Engineering and Industrial Experiment Station (1949-1956).

Sparks, Thomas Wilson, B.S.A., Assistant Dairy Husbandman, Agricultural Extension Service (1952-1954).

Spears, William Davis, Ph.D. (Peabody), Assistant Professor of Education (1956-1956).

Spencer, Ernest Leavitt, Ph.D. (Rutgers), Soils Chemist in Charge, Gulf Coast Experiment Station (1943-1950).

Sperry, John A., M.A., M.A. in L.S., Assistant in Library (1956-1956).

Spiegel, Stanley, M.S., Assistant in Research, Health Center (1956-1956).

Spinks, Daniel Owen, Ph.D. (North Carolina State), Associate Professor of Soils (1947-1956).

Spurlock, Alvin Harold, M.S.A., Agricultural Economist, Agricultural Experiment Station (1934-1953).

Stakely, James Owen, B.S.Arch., A.I.A., Associate Professor of Architecture (1955-1955).

Stanley, Dennis Keith, M.A.E., Dean of the College of Physical Education and Health, and Professor of Physical Education (1946 [31-39] 1946).

Starns, Byron Eugene, B.S.B.A., Director, Campus Shop and Bookstore (1954-1954) (Deceased October 23, 1956).

Starr, Nathan Comfort, Ph.D. (Harvard), Visiting Professor of English and Humanities (1953-1953).

Stearns, Thomas Wesley, Ph.D. (Minnesota), Professor of Agricultural Chemistry (1946-1955).

Stephens, Foy Woodrow, M.P.H., Assistant Professor of Physical Education (1952-1956).

Stephens, John C., B.S., Drainage Engineer, U.S.D.A., Everglades Experiment Station (1950-1950).

Stephens, Richard Badenoch, LL.B., Professor of Law (1949-1954).

Stephens, William Curtis, B.E.E., 1st Lt., Signal Corps, Assistant Professor of Military Science and Tactics (1954-1954).

Sterba, Richard Ludwick Anton, M.A., Assistant Professor of Economics (1956-1956).

Sterling, Hugo Otto, M.S., Assistant Horticulturist, Citrus Experiment Station (1942-1942).

Sterrett, Delbert Ellingsworth, M.A., Assistant Professor of Music (1948-1951).

Stevens, Billie Knapp, M.A., Professor of Professional Physical Education (1936-1954).

STEWART, IVAN, Ph.D. (Rutgers), Associate Biochemist, Citrus Experiment Station (1951-1955).

STEWART, MARJORIE ANN, M.S.E., Head Resident, Women's Residence Halls (1952-1952).

STEWART, WILLIAM ADDISON, A.I.A., Interim Assistant Professor of Architecture (1955-1955).

STOCKSTILL, ROY EDWARD, B.S., Instructor in Engineering Graphics (1955-1955).

STONE, WILLIAM MORGAN, M.S., Assistant in Parasitology, Agricultural Experiment Station (1951-1951).

STORER, MORRIS BREWSTER, Ph.D. (Harvard), Professor of Humanities (1947-1947).

STOUGH, PHILIP NEWMAN, B.A., Assistant Editor, University Press (1953-1953).

STOUT, GERALD JOHN, Ph.D., (Ohio State), Professor of Vegetable Crops (1947-1949).

STOVER, LOREN HAIGHT, Assistant in Horticulture, Watermelon and Grape Investigations Laboratory (1951-1951).

STRICKLAND, THOMAS WHITNEY, M.A.E., Assistant Professor of Education (1943-1944).

STRIPLING, ROBERT OLIN, Ed.D. (Columbia), Professor of Education and Head of Personnel Services (1941-1956).

STRYKER, PHILIP DAVID, Ph.D. (Northwestern), Associate Professor of English (1947-1956).

STUEBE, JO ANNE, B.S., Associate Resident, Women's Residence Halls (1956-1956).

STURGES, LENA EUGENIA, M.S.H.E., Assistant Economist in Food Conservation, Agricultural Extension Service, Tallahassee (1954-1954).

SUIT, ROSS FRISBIE, Ph.D. (Iowa State), Plant Pathologist, Citrus Experiment Station (1945-1946).

SULLIVAN, ARNOLD WAYNE, M.S.E., Associate Professor of Electrical Engineering and Associate Research Professor, Engineering and Industrial Experiment Station (1948-1954).

SUTER, EMANUEL, M.D. (Basel), Professor of Microbiology and Head of Department, College of Medicine (1956-1956).

SUTTON, LARRY MATTHEW, B.S., Assistant in Entomology-Pathology, Citrus Experiment Station (1955-1955).

SVARLIEN, OSCAR, Ph.D. (North Carolina), Professor of History and Political Science (1946-1955).

SWANSON, DANIEL CRAMER, Ph.D. (Cornell), Professor of Physics (1929-1949).

SWANSON, LEONARD ERWIN, D.V.M. (Ohio State), Professor of Parasitology and Parasitologist, Agricultural Experiment Station (1941-1941).

SWEENEY, VICTOR VALENTINE, M.A., C.P.C.U., C.L.U., Professor of Insurance and Interim Head, Department of Business Organization and Operation (1947-1956).

SWETT, MANETTE, M.A., Instructor, P. K. Yonge Laboratory School (1948-1953).

SWINFORD, KENNETH ROBERTS, M.S.F., Associate Professor of Forest Management (1946-1951).

TAPPAN, WILLIAM BURGESS, M.S.A., Assistant Entomologist, North Florida Experiment Station (1955-1955).

TARACOUZIO, TIMOTHY ANDREW, Ph.D. (Harvard), Interim Professor of Law (1956-1956).

TARJAN, ARMEN CHARLES, Ph.D. (Maryland), Associate Nematologist, Citrus Experiment Station (1955-1955).

TARRANT, PAUL, Ph.D. (Duke), Associate Professor of Chemistry (1946-1951).

TARVER, FRED RUSSELL, M.S., Assistant Professor of Poultry Husbandry and Assistant Poultry Husbandman, Agricultural Experiment Station (1956-1956).

Tate, Charles William, B.A., Freshman Football Coach (1956-1956).

Taylor, Edwin Stewart, M.A., Assistant Director of Admissions (1955-1955).

Taylor, Frank H. G., Teaching Assistant, Radio Education, General Extension Division (1955-1955).

Taylor, Grace Elizabeth, M.A., Assistant Law Librarian (1952-1955).

Taylor, Thomas Elliott, M.S., Research Assistant, Engineering and Industrial Experiment Station (1956-1956).

Teas, Howard Jones, Ph.D. (California Institute of Technology), Associate Biochemist, Agricultural Experiment Station (1956-1956).

Tedder, Paul Mathew, B.S.E.E., Research Professor and Section Head, Engineering and Industrial Experiment Station (1943-1943) (Deceased September 19, 1956).

Teller, Aaron J., Ph.D. (Case), Professor of Chemical Engineering and Interim Head of Department; Research Professor, Engineering and Industrial Experiment Station (1956-1956).

Teller, Morton Herman, M.A.E., Curator of Physics (1946 [43-44] 1949).

TeSelle, Clarence John, LL.B., Professor of Law (1928-1929).

Tew, Roy Edwards, Ph.D. (Ohio State), Associate Professor of Speech; Associate, Speech and Hearing Clinic (1937-1955).

Thomas, Gerald Andrew, Ph.D. (Florida), Associate Professor of Chemistry (1950-1955).

Thomason, Oliver Bruce, Ph.D. (Pennsylvania State), Professor of Education (1951 [42-45] 1956).

Thompson, Arthur William, Ph.D. (Columbia), Associate Professor of History (1946-1955).

Thompson, Buford Dale, Ph.D. (Florida), Assistant Horticulturist, Agricultural Experiment Station (1954 [48-51] 1948).

Thompson, Katherine Ruth, B.S. in L.S., Assistant in Library, Education Library (1956-1956).

Thompson, Leonard Garnett, Ph.D. (Iowa State), Soils Chemist, North Florida Experiment Station (1945-1945).

Thompson, Ralph Burnham, Ph.D. (Texas), Associate Professor of Marketing (1955-1955).

Thompson, William Louden, B.S., Entomologist, Citrus Experiment Station (1927-1944).

Thomson, Norman B., B.A., Lecturer in Business Organization and Operation (1956-1956).

Thor, Eric, M.S.A., Associate Professor of Agricultural Economics and Associate Agricultural Economist, Agricultural Experiment Station (1951 [47-49] 1951) (Resigned October 31, 1956).

Thornton, George Daniel, Ph.D. (Iowa State), Assistant Dean, College of Agriculture, and Professor of Soils (1941-1956).

Thoro, Charlotte Carlton, M.A., Interim Instructor in Mathematics (1955-1955).

Thorwald, Walter Earl, M.A., Assistant Director of Florida Union (1954-1954).

Tiffin, William Truitt, M.S.M.E., Professor of Mechanical Engineering and Research Professor, Engineering and Industrial Experiment Station (1947 [44-45] 1954).

Tilley, Wesley Hope, M.A., Assistant Professor of Humanities (1949-1949).

Tillman, Wiley James, B.S.Arch., Assistant Professor of Architecture (1952-1954).

Timberlake, Walter Baldwin, M.B.A., Captain, Assistant Professor of Air Science (1955-1955).

Ting, Sik Vung, Ph.D. (Ohio State), Collaborator, Citrus Experiment Station (1953-1953).

Tinker, Randall Bradford, Ph.D. (Florida), Interim Assistant Research Professor of Pharmacy (1955-1955).

Tison, Jean Pieper, M.A.E., Instructor in Education (1936-1948).

Tissot, Archie Newton, Ph.D. (Ohio State), Entomologist and Head of Department, Agricultural Experiment Station (1925-1946).

Titus, Mary Elizabeth, M.A., Instructor in Physical Education (1953-1953).

Torraca, Pasquale Mario, M.Arch., A.I.A., Professor of Architecture and Interim Head of Department (1947-1956).

Townsend, Henry Duane, M.S., Instructor in Civil Engineering (1956-1956).

Townsend, Julius Charles, B.S., Agricultural Statistician, U.S.D.A., Agricultural Experiment Station (1945-1945).

Townsend, Kenneth Graham, B.S.A., Assistant in Entomology-Pathology, Citrus Experiment Station (1950-1950).

Townsend, Ruth Overstreet, R.N., Assistant in Nutrition, Agricultural Experiment Station (1955 [38-44] 1938).

Travis, Robert William, D.B.A., (Indiana), Assistant Professor of Real Estate (1952-1952).

Traxler, Felicia W., M.A., Instructor in Information and Service, General Extension Division (1928-1928).

Traxler, Ralph N., Ph.D. (Chicago), Assistant Professor of Management (1955-1955).

Trowbridge, Clinton Whiting, M.A., Interim Instructor in English (1956-1956).

Trujillo, Vidal, M.A., Assistant Professor, P. K. Yonge Laboratory School (1944-1945) (On leave 1956-1957).

Tucker, Woodson Coleman, Ph.D. (Florida), Assistant Professor of Chemistry (1946-1951).

Tunison, Paul Bliss, M.Ed., Interim Instructor in Physical Sciences (1954-1954).

Turner, Glover Manuel, LL.B., Assistant Dean of the General Extension Division in Charge of Extension Class Teaching (1929-1945).

Tuttle, Frank Waldo, Ph.D. (Iowa), Associate Professor of Economics (1935-1947).

Tyler, Max Ezra, Ph.D. (Ohio State), Professor of Bacteriology and Head of Department (1953-1953).

Tyner, Mack, Ph.D. (Cincinnati), Professor of Chemical Engineering (1944-1956).

Tyson, Janie Lee, Assistant in Library, Agricultural Experiment Station (1956-1956).

Tyson, Willie Kate, B.S. in L.S., M.A., Assistant Librarian in Charge of Forestry Library (1948-1956).

Urschel, Lillian Tressel, M.S., Assistant Librarian, Agricultural Experiment Station (1953-1956).

Vadheim, Robert Harold, M.D. (Minnesota), Director of Student Health Department and Professor of Hygiene (1954-1954).

Valk, Melvin Ehrman, Ph.D. (Wisconsin), Associate Professor of German (1947-1947).

Van Meter, John Edward, M.A., Instructor in Speech (1952-1952) (On leave first semester 1956-1957).

Van Middelem, Charles Henry, Ph.D. (Cornell), Assistant Biochemist, Agricultural Experiment Station (1951-1951).

Varley, Daniel Albert, B.S., Captain, Assistant Professor of Air Science (1955-1955) (Resigned September 30, 1956).

VERMILYE, DYCKMAN WARE, M.A., Associate Director of Housing (1950-1955).

VILECE, ROBERT JOSEPH, Ph.D. (Massachusetts), Assistant Professor of Food Technology (1953-1953).

VOLK, GAYLORD MONROE, Ph.D. (Wisconsin), Soils Chemist, Agricultural Experiment Station (1939-1939).

VOSS, ELBERT, Ph.D. (Florida), Professor of Pharmacognosy and Pharmacology and Head of Department (1948-1948).

VOWLES, RICHARD B., Ph.D. (Yale), Associate Professor of English (1951-1956).

VOYLES, LOUIS VERNON, B.A., Assistant University Examiner (1948-1948).

WADDELL, GLENN H., M.S., Interim Assistant in Bacteriology (1956-1956).

WADSWORTH, JOHN GAIL, D.V.M. (Kansas State), Assistant Professor of Veterinary Science and Assistant Poultry Pathologist, Agricultural Experiment Station (1954-1954) (Resigned September 5, 1956).

WAGLOW, IRVING FREDERICK, M.Ed., Associate Professor of Physical Education (1946-1954).

WAITES, ROBERT ELLSWORTH, Ph.D. (Ohio State), Assistant Entomologist, Agricultural Experiment Station (1951-1951).

WAKEFIELD, TROY MARSHALL, M.S.T., Assistant Professor of Church and Community Service, General Extension Division (1951-1951).

WALDO, TOMMY RUTH, M.A., Instructor in Music (1955-1955).

WALKER, ALLAN PALMER, B.S., Major, Assistant Professor of Air Science (1953-1953) (Resigned August 17, 1956).

WALKER, BIRON HELTON, M.A., Assistant Professor of English (1942-1947).

WALKER, LYNN WESLEY, M.A., Assistant Librarian in Charge of Engineering Library and Assistant Professor of Engineering Graphics (1952-1954).

WALKER, ROBERT DIXON, M.S., Research Professor, Engineering and Industrial Experiment Station (1944-1944).

WALKER, SUE ROBERTS, B.S., Assistant in Library, Acquisitions (1947-1947).

WALKER, VIRGINIA CALLAN, Head Resident, Women's Residence Halls (1949-1952).

WALLACE, ALVIN THOMAS, Ph.D. (North Carolina State), Associate Agronomist, Agricultural Experiment Station (1950-1956).

WALLACE, HAROLD DEAN, Ph.D. (Cornell), Associate Professor of Animal Nutrition and Associate Animal Husbandman, Agricultural Experiment Station (1950-1953).

WALLACE, HOWARD KEEFER, Ph.D. (Florida), Professor of Biology and Head of Department (1932-1955).

WALLACE, MAXWELL JOSEPH, Ph.D. (Cornell), Assistant Professor of French (1946 [36-40] 1951).

WALLACE, RUSSELL WILLIS, B.S., Associate Agronomist, North Florida Experiment Station (1942-1942).

WALLBRUNN, HENRY MAURICE, Ph.D. (Chicago), Assistant Professor of Biology (1951-1951).

WALTER, JAMES MUNDAY, Ph.D. (Minnesota), Plant Pathologist, Gulf Coast Experiment Station (1947-1947).

WANDER, IRVIN WOODROW, Ph.D. (Ohio State), Soils Chemist, Citrus Experiment Station (1947-1947).

WANG, CHI WU, Ph.D. (Harvard), Assistant Professor of Forest Genetics (1954-1954).

WARFEL, HARRY REDCAY, Ph.D. (Yale), Professor of English (1948-1948).

WARNICK, ALVIN CROPPER, Ph.D. (Wisconsin), Associate Professor of Animal Husbandry and Associate Physiologist, Agricultural Experiment Station (1953-1956).

Warren, Jessie Alma, M.A. in L.S., Assistant Editor and Visual Aids Specialist, Home Demonstration Work, Tallahassee (1951-1951).

Warshyk, Edward A. J., Shop Foreman, Engineering and Industrial Experiment Station (1950-1950).

Waters, Rolland Hays, Ph.D. (Chicago), Professor of Psychology (1952-1952).

Wathen, Lawrence James, M.A., Assistant Professor of Humanities (1950-1951).

Watkins, John Vertrees, M.S.A., Professor of Ornamental Horticulture (1926-1955).

Watkins, Laura Jones, M.A., Instructor in Education (1943-1950).

Watkins, Marshall Owen, D.P.A. (Harvard), Director, Agricultural Extension Service (1941-1956).

Watkins, Maud Coward, M.A.E., Instructor, P. K. Yonge Laboratory School (1946-1953).

Wattenbarger, James Lorenzo, Ed.D. (Florida), Associate Professor of Education (1947-1955) (On leave 1956-1957).

Weaver, Jennings Clark, Ph.M., Associate Professor of Journalism and Communications and Production Director, Radio Production Center (1949-1956).

Webb, John Nye, Ph.D. (Columbia), Professor of Economics (1943-1944).

Webb, Thomas Elliott, B.S.A., Assistant Agronomist, North Florida Experiment Station (1950-1954) (On leave second semester 1956-1957).

Webber, Irving Leonard, M.A., Assistant Professor of Sociology and Anthropology (1953-1953).

Weber, George Frederick, Ph.D. (Wisconsin), Professor of Plant Pathology and Forestry (1922-1932).

Weil, Joseph, M.S., Dean of the College of Engineering and Professor of Electrical Engineering; Director, Engineering and Industrial Experiment Station (1921-1937).

Weimer, Rae O., Director of the School of Journalism and Communications, and Professor of Journalism (1949-1953).

Wellman, Felix Dennis, B.S., Captain, Assistant Professor of Air Science (1955-1955).

Wells, Thomas Nathan, B.S.E.E., Director, University Printing Department (1950-1954).

Welsch, Walter Roland, M.Ed., Instructor in Physical Education and Assistant Track Coach (1954-1954).

Welty, Paul S., Ph.D. (Chicago), Associate Professor of Social Sciences (1955-1955) (On leave 1956-1957).

Wennberg, Benkt, Ph.D. (Pennsylvania), Assistant Professor of French (1956-1956).

Wenzel, Frederick William, Ph.D. (Massachusetts), Chemist, Citrus Experiment Station (1948-1948).

Wershow, Irving Robert, Ph.D. (Yale), Associate Professor of Spanish (1946-1954).

West, Erdman, M.S., Professor of Botany; Botanist and Mycologist, Agricultural Experiment Station (1925-1927).

West, Stanley Leroy, LL.B., B.S. in L.S., Director of Libraries and Professor of Library Science (1946 [38-40] 1946).

Westfall, Minter Jackson, Ph.D. (Cornell), Associate Professor of Biological Sciences (1947-1955).

Westgate, Philip John, Ph.D. (Cornell), Associate Horticulturist, Central Florida Experiment Station (1949 [43-46] 1949).

Wethington, John Adams, Ph.D. (Northwestern), Associate Professor of Chemistry and Associate Research Professor, Engineering and Industrial Experiment Station (1953-1956).

WHARTON, WILLIAM LOUIS, M.Ed., Assistant Director of Admissions (1953-1953).

WHETSTONE, ROBERT WICKHAM, Ph.D. (North Carolina), Assistant Professor of Education (1956-1956).

WHITE, FRANKLIN HENRY, Ph.D. (Illinois), Assistant Bacteriologist, Agricultural Experiment Station (1955-1955).

WHITE, JAKE B., B.S.A., Associate Agronomist, North Florida Experiment Station (1941-1944).

WHITE, JOSEPH BENTON, Ph.D. (Peabody), Dean of the College of Education and Professor of Education (1948-1949).

WHITEHEAD, RICHARD HOLMES, B.A., Associate Registrar (1938-1952).

WHITNER, BENJAMIN FRANKLIN, B.S.A., Assistant Horticulturist, Central Florida Experiment Station (1945 [22-26] 1945).

WHITTINGTON, WILLIS ARLING, M.Ed., Teacher, P. K. Yonge Laboratory School (1953-1953).

WIGGINS, MACDONALD JOHNSTON, B.S.E.E., Assistant Professor of Electrical Engineering and Assistant Research Professor, Engineering and Industrial Experiment Station (1953-1955).

WIGHT, ROBERT C., 1st. Lt., Assistant Professor of Air Science (1956-1956).

WILCOX, DONALD BROOKS, M.S.M.E., Professor of Industrial Engineering (1952-1952).

WILES, KIMBALL, Ph.D., (Ohio State), Professor of Education and Assistant Dean of the College of Education (1950-1955).

WILGUS, A. CURTIS, Ph.D. (Wisconsin), Director, School of Inter-American Studies and Professor of History (1951-1951).

WILKES, JOSEPH ALLEN, B.Arch., A.I.A., Associate Professor of Architecture (1952-1956).

WILKOWSKE, HOWARD H., Ph.D. (Iowa State), Associate Professor of Dairy Manufactures and Associate Dairy Technologist, Agricultural Experiment Station (1950-1954).

WILLIAMS, DONALD RAYMOND, M.Ed., Teacher, P. K. Yonge Laboratory School (1954-1954).

WILLIAMS, EDWARD THOMAS, B.S.M.E., Captain, Corps of Engineers, Assistant Professor of Military Science and Tactics (1955-1955).

WILLIAMS, HERMAN BARNES, B.M.E., Associate Professor of Engineering Graphics (1946-1947).

WILLIAMS, OSBORNE, Ph.D. (Chicago), Assistant Professor of Psychology (1927-1927).

WILLIAMSON, ROBERT CROZIER, Ph.D. (Wisconsin), Professor of Physics and Head of Department (1930-1930).

WILLINGHAM, JAMES WESLEY, Ph.D. (Minnesota), Assistant Professor of Forestry (1950-1955).

WILSON, JAMES GRAVES, Ph.D. (Yale), Professor of Anatomy and Head of Department, College of Medicine (1955-1955).

WILSON, JAMES LARRYMORE, Ph.D. (North Carolina), Associate Professor of English (1947 [39-42] 1956).

WILSON, JOHN WALLACE, Sc.D. (Harvard), Entomologist, Central Florida Experiment Station (1930-1938).

WILSON, WILLIAM HAROLD, Ph.D. (Illinois), Professor of Logic and Head of Department; Counselor (1927-1946).

WIMBERLY, STANLEY EUGENE, Ph.D. (Michigan), Assistant Dean of the College of Arts and Sciences and Professor of Psychology (1946 [41-45] 1951).

WINFREE, JULES P., Ph.D. (Rutgers), Assistant Soils Chemist, Everglades Experiment Station (1955-1955).

Wing, Alexander Holbrook, Ph.D. (Columbia), Professor of Electrical Engineering (1955-1955).

Wing, James Marvin, Ph.D. (Iowa State), Assistant Professor of Dairy Science and Assistant Dairy Husbandman, Agricultural Experiment Station (1951-1951).

Winsor, Arthur Nelson, M.S.E., Assistant Professor of Civil Engineering (1945-1948).

Winsor, Donald L., M.Ed., Interim Instructor in Education (1956-1956).

Winsor, Herbert Williams, B.S.A., Assistant Chemist, Agricultural Experiment Station (1930-1930).

Winter, William E., Ph.D. (Missouri), Assistant Professor of Journalism and Communciations (1955-1955).

Winters, Edward Phillip, M.S., Instructor in Pharmacy (1956-1956).

Wirtala, Arnold Ernest, Ed. D. (Florida), Assistant Professor of Music (1948-1952).

Wise, Jacob Hooper, Ph.D. (Peabody), Professor of English and Head of C-3: Reading, Speaking and Writing (1925-1935).

Wise, William Max, Ed.D. (Columbia), Dean of Student Personnel (1948-1948) (On leave 1956-1957).

Wofford, Irvin Mirle, Ph.D. (Michigan State), Assistant Agronomist, Agricultural Experiment Station (1953 [49-51] 1953).

Wolf, Emil Andrew, M.S., Associate Horticulturist, Everglades Experiment Station (1948-1956).

Wolfe, Herbert Snow, Ph.D. (Chicago), Professor of Fruit Crops (1930-1932).

Wolfenbarger, Daniel Otis, Ph.D. (Cornell), Entomologist, Subtropical Experiment Station (1945-1946).

Wolff, George Elliott, Ph.D. (North Carolina), Assistant Professor of Social Sciences (1950-1956).

Wolford, Richard Wilson, M.A., Collaborator, Citrus Experiment Station (1951-1951).

Woltz, Shreve Simpson, Ph.D. (Rutgers), Assistant Horticulturist, Gulf Coast Experiment Station (1953-1953).

Wood, Michael Joseph, B.A., Director of Patient Services, Health Center, (1954-1955).

Wood, William Lawrence, B.E.E., Instructor in Electrical Engineering and Assistant in Research, Engineering and Industrial Experiment Station (1956-1956).

Wood, Wyatt Sumner, Interim Assistant Research Professor, Engineering and Industrial Experiment Station (1951-1951).

Woodruff, George Robert, B.S.E., Head Football Coach and Director of Intercollegiate Athletics (1950-1950).

Woodrum, W. Byron, M.S., Interim Instructor in Forestry (1956-1956).

Worcester, Donald Emmet, Ph.D. (California), Professor of History and Head of Department (1947-1955) (On leave 1956-1957).

Wrenn, Charles Leslie, Rawlinson and Bosworth Professor of Anglo-Saxon, Oxford University, Visiting Professor of English (1956-1956).

Wright, Arthur Gilbert, M.S., Curator of Exhibits, Florida State Museum (1953-1953).

Wright, Ernest Bevier, Ph.D. (California Institute of Technology), Associate Professor of Physiology, College of Medicine (1956-1956).

Wunderlich, Henry, Ph.D. (Texas), Professor of Psychology (1947-1956).

WYATT, JOHN WALTON, S.J.D. (George Washington), Professor of Business Law (1948-1956).

YALEM, RONALD JOSEPH, Ph.D. (American), Interim Instructor in Political Science (1956-1956).

YARBOROUGH, ORIN S., B.A., C.P.A., Auditor, Business Office (1954-1954).

YATES, HARRY EDGAR, Assistant Meteorologist, Weather Forecasting Service, U.S.D.A. (1954-1954).

YEARLEY, CLIFTON KREBS, Ph.D. (Johns Hopkins), Instructor in Social Sciences (1954-1954).

YODER, LOWELL CURTIS, M.A., Associate Professor of Marketing (1949-1949).

YOHO, WILLIAM HERBERT, M.S., Assistant Professor of Physical Sciences and Geology (1951-1951).

YON, EVERETT MARION, B.S., Administrative Assistant, Intercollegiate Athletics (1950-1950).

YONGE, JULIAN CHANDLER, Director, P. K. Yonge Library of Florida History (1944-1944).

YONGE, PHILLIP KEYES, LL.B., Professor of Law (1949-1954).

YOUNG, CANNING K. M., M.A.F.A., Associate Professor of Architecture (1955-1955).

YOUNG, JOHN ADAMS, Ph.D. (Florida), Associate Research Professor, Engineering and Industrial Experiment Station, and Associate Professor of Chemistry (1953-1956).

YOUNG, THOMAS WILBUR, Ph.D. (Cornell), Associate Horticulturist, Subtropical Experiment Station (1953 [42-49] 1942).

YOUNG, WILLIAM RICHARD, M.S.E., Interim Assistant Professor of Industrial Engineering and Interim Assistant Research Professor, Engineering and Industrial Experiment Station (1956-1956).

YOUNG, WILLIAM WELCH, B.A., Instructor, Group Dynamics and Leadership Training, General Extension Division (1955-1955).

YOUNGS, MARIAN AMELIA, M.A.L.S., Assistant Librarian, Technical Processes (1949 [34-38] 1949).

YOUNT, JAMES L., Ph.D. (Hawaii), Assistant Professor of Biological Sciences (1954-1954).

YUAN, TZU LIANG, Ph.D. (Ohio State), Interim Assistant in Soils, Agricultural Experiment Station (1955-1955).

ZASTROW, CHARLES EDWARD, M.A., Psychometrist, Veterans Guidance Center (1955-1955).

ZETROUER, WALLACE FEASTER, M.S.E., Assistant Professor of Electrical Engineering and Assistant Research Professor, Engineering and Industrial Experiment Station (1943-1956).

ZIA, PAUL ZUNG-TEH, M.S.C.E., Instructor in Civil Engineering (1955-1955).

ZIEGLER, LOUIS WILLIAM, Ph.D. (Florida), Associate Professor of Fruit Crops (1947 [30-31] 1951).

ZIMMERMAN, IRENE, Ph.D. (Michigan), Assistant Librarian, Reference and Bibliography (1951-1951).

ZIMMERMAN, LELAND L., Ph.D. (Wisconsin), Assistant Professor of Speech (1955-1955).

ZIMPFER, WALTER HENRY, M.S., Associate Professor of Civil Engineering and Associate Research Professor, Engineering and Industrial Experiment Station (1950-1956).

ZMESKAL, OTTO, Sc.D. (Massachusetts Institute of Technology), Research Professor, Engineering and Industrial Experiment Station (1954-1954).

UNIVERSITY OF FLORIDA
COUNTY AND HOME DEMONSTRATION AGENTS, AGRICULTURAL EXTENSION SERVICE

Adams, Donald Ezell, M.Ag., Dixie County Agent (1950-1953).

Alexander, Camilla Radney, B.S., Liberty County Home Demonstration Agent (1947-1947).

Andrews, Adam Tucker, B.S.A., Assistant Alachua County Agent (1954-1954).

Andrews, Rance Adam, B.S.A., Hamilton County Agent (1953-1955).

Armor, Jadie Obie, B.S.A.E., Assistant Hillsborough County Agent (1941-1941).

Atkinson, Ethel, B.A., Escambia County Home Demonstration Agent (1929-1929).

Baetzman, Frederick Ernest, B.S.A., Orange County Agent (1935-1935).

Barco, Johnnie Frank, B.S.A., Hardee County Agent (1950-1953).

Bass, Bernice Odell, M.S.A., Assistant Lake County Agent (1956-1956).

Baxter, Ray Cole, B.S., Citrus County Home Demonstration Agent (1953-1953).

Beem, Jean, B.S.A., Assistant Hillsborough County Agent (1948-1949).

Bennett, Mary Haynie, B.S.H.E., St. Lucie County Home Demonstration Agent (1954-1954).

Blitch, Loonis, B.A.E., Alachua County Agent (1931-1931).

Boehmer, Edith Meier, Assistant Home Demonstration Agent for Indian Work (1955-1955).

Botts, Lora Aline, B.S., Santa Rosa County Home Demonstration Agent (1947-1947).

Boyles, Clifford Raymond, Okeechobee County Agent (1944-1944).

Brabson, Catherine, M.S., Highlands County Home Demonstration Agent (1945-1945).

Brinkley, Harry John, M.S.A., Hernando County Agent (1941-1941).

Brown, Laleah Burnett, B.S., Sarasota County Home Demonstration Agent (1947-1947).

Burdine, Martha Carolyn, M.S.H.E., Martin County Home Demonstration Agent (1956 [52-55] 1956).

Burgess, Jane Randal, B.S.H.E., Assistant Jackson County Home Demonstration Agent (1954-1954).

Burkhalter, James Clarence, B.S.A., Assistant Lake County Agent (1954-1954).

Butcher, Erma Linderman, B.S.H.E., Assistant Dade County Home Demonstration Agent (1955-1955).

Byrd, Carlisle Appleby, B.S.A., Assistant Pasco County Agent (1954-1954).

Caldwell, Verne McDill, B.S.A., Assistant Hillsborough County Agent (1955-1955).

Cameron, Josephine Moore, B.S., Assistant Duval County Home Demonstration Agent (1953-1955).

Campbell, John Douglas, B.S.A., Dade County Agent (1947-1955).

Carr, Horace Mixon, B.S.A., Bay County Agent (1951-1951).

Causey, John Hjalmar, B.S.A., Assistant Palm Beach County Agent (1948-1948).

Champagne, Roy Jean, M.S., Assistant Dade County Agent (1953-1953).

Childers, Sallie Russell, B.S., Taylor County Home Demonstration Agent (1954-1954).

Clark, Bernard Hentz, B.S.A., Assistant Gadsden County Agent (1948-1948).

Clark, Kenneth Ames, B.S.A., Sarasota County Agent (1942-1942).

Clay, Ralph Thomas, B.S.A., Assistant Putnam County Agent (1949-1949).

Cobb, Leonard Clarence, B.S.A., Gilchrist County Agent (1951-1953).

Coburn, Linnie Ruth, B.S., Levy County Home Demonstration Agent (1954-1954).

Cochran, Nannie Moxley, B.S.H.E., Assistant Duval County Home Demonstration Agent (1956-1956).

Collier, Mathew Wayne, B.S.A., Assistant Broward County Agent (1955-1955).

Connell, James Richard, B.S.A., Assistant Sumter County Agent (1955-1955).

Cook, Harold Hilton, B.S.A., Glades County Agent (1954-1955).

Cowen, Edward James, B.S.A., Assistant Columbia County Agent (1955-1955).

Cowen, William Joshua, B.S.A., Union County Agent (1946-1948).

Crews, Julius Paul, B.S.A., Suwannee County Agent (1953-1954).

Cribbett, Albert Franklin, B.S.A., Assistant Orange County Agent (1954-1954).

Crown, Demetra Tarrant, B.S.H.E., Assistant Duval County Home Demonstration Agent (1955-1955) (Resigned July 31, 1956).

Cunningham, Harrell Wilson, B.S.A., Assistant Brevard County Agent (1951-1951).

Cunningham, Lemuel Edward, B.S.A., Assistant Pinellas County Agent (1947-1947).

Curtis, Robert George, B.S.A., Assistant Manatee County Agent (1952-1952).

Daly, Paul Anthony, B.S.A., Assistant Polk County Agent (1955-1955).

Daughtry, Mamie Skinner, B.S.H.E., Leon County Home Demonstration Agent (1947-1951).

Davis, Anita Burnam, M.A., St. Johns County Home Demonstration Agent (1952-1952) (Resigned August 15, 1956).

Davis, Henry Pittman, B.S.A., Taylor County Agent (1950-1954).

Davis, Johnnie Everette, B.S.A., Washington County Agent (1948-1951).

Dawson, Charles Ralph, M.S.A., Seminole County Agent (1934-1934) (Retired July 31, 1956).

Denmark, Patricia Lee, B.S.H.E., Assistant Manatee County Home Demonstration Agent (1956-1956).

DeVore, Caroline Lila, B.S.H.E., Assistant Pasco County Home Demonstration Agent (1956-1956).

Dietrich, Marilyn, B.S., Osceola County Home Demonstration Agent (1956-1956).

Dinkins, Paul LeRoy, M.Ag., Assistant St. Johns County Agent (1956-1956).

Doke, Alexander Kent, B.S.A., Assistant Suwannee County Agent (1955-1955).

Dozier, Charles Thomas, B.S.A., Assistant Santa Rosa County Agent (1953-1953). (Resigned August 31, 1956).

Drane, Charlotte Wardlaw, B.A., Assistant Marion County Home Demonstration Agent (1955-1955) (Resigned August 31, 1956).

Driggers, Albert Gilchrist, B.S.A., Gadsden County Agent (1945-1945) (Retired September 30, 1956).

Duckett, Betty Joan, B.A., Walton County Home Demonstration Agent (1955-1955).

Dukes, Neal Matthew, B.S., Columbia County Agent (1952-1952).

Durre, Noland Loyd, M.S., Assistant Dade County Agent (1952-1952).

Eby, Edna Louise, B.S.H.E., Volusia County Home Demonstration Agent (1943-1948).

Elkins, Ruth McKeown, B.S.H.E., Polk County Home Demonstration Agent (1942-1942).

Ellis, Gordon Brooks, Nassau County Agent (1944-1946).

Farrel, Wilburn Carlos, M.A., Levy County Agent (1951-1955).

Finlay, Annie Wood, B.S., Calhoun County Home Demonstration Agent (1954-1954).

Fischer, Everette Henry, B.S.A., Assistant Marion County Agent (1956-1956).

Fulton, May Ola, B.S.H.E., Sumter County Home Demonstration Agent (1954-1954).

George, Donald Atkinson, B.S.A., Assistant Sarasota County Agent (1954-1954).
Glenn, Woodrow Wilson, M.Ag., Jackson County Agent (1944-1944).
Glennan, Sue Powers, B.S., Clay County Home Demonstration Agent (1950-1950).
Gray, Howard Clinton, B.S.A., Assistant Bay County Agent (1956-1956).
Gregory, Marjorie Butler, B.S.H.E., Gadsden County Home Demonstration Agent (1952-1953).
Griffis, Raleigh Sidney, M.Ag., Assistant Palm Beach County Agent (1953 [49-50] 1949).
Haddox, Jackson Alexander, M.A., Assistant Polk County Agent (1951-1951).
Hall, Myndall Ira, B.S.H.E., Assistant Escambia County Home Demonstration Agent (1956-1956).
Hamrick, Oliver Rudolph, M.Ag., Madison County Agent (1950-1951).
Hanson, Ethel Weeks, B.S.H.E., Manatee County Home Demonstration Agent (1951-1954).
Hardiman, Helen Roberson, B.S., Suwannee County Home Demonstration Agent (1956-1956).
Harrell, Aubrey Luther, M.Ag., Baker County Agent (1950-1952).
Harris, Bert Jerome, B.S.A., Highlands County Agent (1948-1952).
Harrison, Gene Broward, B.S., Assistant Marion County Agent (1956-1956).
Harrison, Henry Oscar, M.Ag., Walton County Agent (1944-1946).
Hatcher, William Lester, B.S.A., Assistant Hillsborough County Agent (1954-1954).
Hayman, Jack Carlton, B.S.A., Assistant Highlands County Agent (1953-1953).
Hayman, William Paul, B.S.A., Polk County Agent (1928-1928).
Heath, Alyne Carter, Jackson County Home Demonstration Agent (1943-1943).
Helgren, Camille Napier, B.S.H.E., Assistant Dade County Home Demonstration Agent (1953-1953).
Heuck, Carl Peter, B.S.A., Lee County Agent (1926-1926).
Higgins, James Francis, M.A., Pasco County Agent (1944-1944).
Hill, Virginia Ruth, B.S., Assistant Hillsborough County Home Demonstration Agent (1954-1954).
Holland, Virginia Jo, B.S., DeSoto County Home Demonstration Agent (1955-1955).
Horton, Sara, M.A., Hardee County Home Demonstration Agent (1945-1945).
Huggins, George Thomas, B.S.A., Bradford County Agent (1941-1950).
Jeter, Ann Pierce, B.S., Assistant Santa Rosa County Home Demonstration Agent (1956-1956).
Johnson, Cora Sue, B.S., Assistant Polk County Home Demonstration Agent (1955-1955).
Johnson, Levi Mott, B.S.A., Martin County Agent (1944-1944).
Joiner, Oscar Lee, B.S.A., Assistant Levy County Agent (1955-1955).
Jones, Thomas Byron, B.S.A., Calhoun County Agent (1948-1948).
Jorgensen, Milford Christen, B.S.A., Assistant Hillsborough County Agent (1954-1954).
Kelly, Earl McNeil, B.S.A., Assistant Manatee County Agent (1949-1950).
Kendrick, Wilson Harper, B.S.A., Manatee County Agent (1946-1952).
Kent, Olga Mary, B.S.H.E., Dade County Home Demonstration Agent (1946 [35-44] 1953).
Kierce, Sterner Clive, B.S.A., Santa Rosa County Agent (1934-1934).
Kime, Charles Davidson, B.S., St. Lucie County Agent (1944 [17-26] 1917).
Kiser, Lora Antoinette, B.S.H.E., Hillsborough County Home Demonstration Agent (1946-1946).

Kloeppel, William Eugene, B.S.A., Assistant Duval County Agent (1951-1951).
Knapp, Douglas Merriweather, M.S., Assistant Dade County Agent (1955-1955).
Laird, Addison Shuler, M.S.A., Wakulla County Agent (1936 [27-28] 1936).
Laird, Cubie Revonie, B.S.A., Gulf County Agent (1945-1945).
Lander, Donald Wilson, M.A., Collier County Agent (1950-1952).
Lattimer, Charlotte Mangan, B.S.H.E., Pinellas County Home Demonstration Agent (1950-1950).
Llewellyn, William Robert, B.S.A., Assistant Dade County Agent (1954-1954).
Logan, John Henry, B.S.A., Pinellas County Agent (1927-1927).
Ludeman, Marjorie Kathleen, B.S.H.E., Orange County Home Demonstration Agent (1952-1952).
Luttrell, James Norman, B.S.A., Assistant Volusia County Agent (1954-1954).
MacTavish, Helen Bone, B.S.A., Assistant Dade County Home Demonstration Agent (1953-1953).
Maines, Orlando Melvin, B.S.A., Sumter County Agent (1942-1942).
Maltby, Hubert Edmond, Putnam County Agent (1943-1943).
McCall, Emmett Dehyrl, B.S.A.E., Clay County Agent (1942-1942).
McCullars, Forrest Noble, B.S.A., Indian River County Agent (1953-1955).
McDonald, Joyce, B.S.H.E., Assistant Orange County Home Demonstration Agent (1956-1956).
McMillan, Fillmore Allen, M.S.A., Okaloosa County Agent (1954-1955).
McMullen, Phillips Ramage, B.S.A., St. Johns County Agent (1949 [33-46] 1933).
McQueen, Nathaniel Holderby, B.S.A.E., Charlotte County Agent and Assistant 4-H Club Agent (1935-1935).
McSwine, Josephine Hemphill, B.S.H.E., Alachua County Home Demonstration Agent (1945-1945).
Medlin, Quentin, B.S.A., Citrus County Agent (1947-1950).
Mills, Nellie Daughtry, B.S., Duval County Home Demonstration Agent (1948-1948).
Montsdeoca, Fred, Assistant County Agent for Indian Work (1955-1955).
Moore, Mary Allen, B.S.Ed., Assistant Orange County Home Demonstration Agent (1954-1954).
Mounts, Marvin Umphrey, Palm Beach County Agent (1925-1929).
Nix, Fern Sulphin, B.S.H.E., Jefferson County Home Demonstration Agent (1954-1954).
Norris, Robert Elfred, B.S.A., Lake County Agent (1935-1937).
Odom, Albert Hill, B.S.A., Jefferson County Agent (1947-1951).
O'Quinn, Clarence Fentress, B.S.A., Assistant Hillsborough County Agent (1954-1954).
Oxford, James Thomas, B.S.A., Brevard County Agent (1942-1942).
Patten, Jack Dowdell, B.S.A., Associate County Agent, Okaloosa and Santa Rosa Counties (1955-1955).
Paulk, Harvey Timothy, M.Ag., Assistant Madison County Agent (1956-1956).
Payne, Dorcas Lambe, B.A., Washington County Home Demonstration Agent (1954-1955).
Penner, Ruth Taylor, B.S.H.E., Assistant Dade County Home Demonstration Agent (1948-1948).
Pierce, Elizabeth Hudson, B.S.H.E., Assistant Palm Beach County Home Demonstration Agent (1951-1951).
Polhill, Frank Leonard, B.S.A., Flagler County Agent (1952-1954).

Pressley, Evelyn Cribbs, B.S.H.E., Assistant Leon County Home Demonstration Agent (1954-1954).

Price, Rayburn Kenneth, B.S.A., Assistant Palm Beach County Agent (1952-1952).

Pryor, Robert Shepherd, B.S., Broward County Agent (1946-1955).

Reese, Marguriette Fountain, B.S., Assistant Brevard County Home Demonstration Agent (1953-1953).

Rhoden, James Lloyd, M.Ag., Leon County Agent (1946-1946).

Roberts, Harry Franklin, Ph.D. (Florida), Assistant Dade County Agent (1955-1955) (Resigned September 15, 1956).

Robertson, Edwena Jeanette, B.S.H.E., Assistant Gadsden County Home Demonstration Agent (1954-1954).

Ross, Dorothy Pearl, B.S.H.E., Bradford County Home Demonstration Agent (1947-1948).

Rowan, Charles Edison, B.S.A., Assistant Citrus County Agent (1954-1954).

Rowan, Edsel Wright, B.S.A., Marion County Agent (1950-1954).

Rowley, Mary Oliver, B.S., Assistant Lake County Home Demonstration Agent (1956-1956).

Rudd, Russell Shaird, B.S.A., Assistant Calhoun County Agent (1956-1956).

Rush, Allie Lee, B.S., Marion County Home Demonstration Agent (1929-1929) (Deceased September 21, 1956).

Russell, John Coleman, B.S.A., Holmes County Agent (1952-1952).

Sabbarese, Evelyn Ingraham, B.S., Nassau County Home Demonstration Agent (1956-1956).

Scott, Lenzy Maurice, B.S.A., Assistant Leon County Agent (1955-1955).

Sewell, Glenn McClellan, Columbia County Home Demonstration Agent (1945-1945).

Shamsedin, Dolores York, B.A., Assistant Alachua County Home Demonstration Agent (1954-1954).

Shuler, Fredrick Myers, B.S.A., Hendry County Agent (1951-1956).

Smith, Charles Raymond, B.S.A., Liberty County Agent (1953-1954).

Smith, James Blanchard, B.S.A., Osceola County Agent (1950-1954).

Speer, Herbert Lawson, M.S.A., Assistant Palm Beach County Agent (1943-1946).

Starbird, Elizabeth Williams, B.S., Putnam County Home Demonstration Agent (1942-1942).

Stearns, Mary Riedel, B.S.H.E., Pasco County Home Demonstration Agent (1950-1950).

Stephens, Eugene Norbert, B.S.A., Escambia County Agent (1941-1941).

Stevenson, Emma Louise, B.S.H.E., Bay County Home Demonstration Agent (1950 [46-49] 1950).

Storey, Cleveland Umphrey, B.S.A., Associate County Agent, Holmes and Washington Counties (1954-1954).

Stubblefield, Dora Smith, Okaloosa County Home Demonstration Agent (1956-1956).

Swanson, Henry Frederick, M.S.A., Assistant Orange County Agent (1948-1948).

Taylor, Eula Louise, B.S., Broward County Home Demonstration Agent (1937-1937).

Taylor, Howard, B.S.A., Assistant Duval County Agent (1955-1955).

Taylor, Lawrence Dennis, B.S.A., Assistant Jackson County Agent (1954-1954).

Thomaston, James Edsel, B.S., Assistant Leon County Agent (1954-1954).

Tilley, Jo Ann, B.S., Assistant Pinellas County Home Demonstration Agent (1955-1955).

Todd, Mary Leah, B.S.H.E., Palm Beach County Home Demonstration Agent (1955-1955).

Townsend, Thomas Ralph, M.Ag., Volusia County Agent (1948-1954).

Tucker, Cecil Argule, M.S., Seminole County Agent (1954-1956).

Valentine, Marian Bullard, B.S.H.E., Lake County Home Demonstration Agent (1954-1954).

Walker, James Henry, M.S.A., Assistant Escambia County Agent (1949-1955).

Watson, James Nicholas, B.S.A., Duval County Agent (1946-1949).

Watson, Lewis Elbyrne, M.Ag., Assistant Broward County Agent (1955-1955).

Wetters, Doris Evelyn, B.S.H.E., Assistant Hillsborough County Home Demonstration Agent (1956 [53-54] 1953).

Whelchel, Hugh Calvin, B.A., Assistant Dade County Agent (1956-1956).

White, Alec, B.S.A., Hillsborough County Agent (1935-1935).

White, Helen Arnold, B.S., Assistant Escambia County Home Demonstration Agent (1954-1954) (Resigned July 31, 1956).

Whittle, Winton Oziel, M.A., Lafayette County Agent (1953-1956).

Williams, Herbert Austin, B.S.A., Assistant Pinellas County Agent (1954-1954).

Williams, Laura Wood, B.A., Assistant Clay County Home Demonstration Agent (1955-1955).

Wilson, Myrtie Clara, B.S.H.E., Seminole County Home Demonstration Agent (1954-1954).

Winter, Calvin Arnold, M.S., Assistant Escambia County Agent (1955-1955).

Woods, William Lyle, B.A., DeSoto County Agent (1943-1943).

Wortman, Wilson Frank, B.S.A., Assistant Collier County Agent (1956-1956).

Yates, Robert, B.S.A., Assistant Polk County Agent (1956-1956).

Yelvington, James Russell, M.Ag., Assistant Duval County Agent (1952-1952).

Young, Sue Bettersworth, B.S., Brevard County Home Demonstration Agent (1953-1953).

Zipperer, Almon Smith, B.S.H.E., Madison County Home Demonstration Agent (1955-1955).

Zorn, William Carlton, B.S.A., Franklin County Agent (1949-1953).

MEMBERS OF THE FACULTY WHO RETIRED PRIOR TO THE 1956-57 SESSION

(The date indicates year of retirement)

Atkins, Ernest George, Ph.D. (Harvard), Professor of French (1950).

Blacklock, Raymond William, B.A., State Boys' 4-H Club Agent, Agricultural Extension Service (1949).

Blackmon, Gulie Hargrove, M.S.A., Horticulturist Emeritus, Agricultural Experiment Station (1954).

Bless, Arthur Aaron, Ph.D. (Cornell), Professor Emeritus of Physics and Director of Bioelectric Potentials Project (1951).

Boutelle, Margaret White, M.A., Assistant Professor of Education (1954).

Bristol, Mary Cornell, B.S., Biology Librarian (1949).

Brown, Hamlin L., B.S.A., Dairy Husbandman, Agricultural Extension Service (1946).

Brown, Richard Dewitt, B.M., Professor of Music (1953).

Brush, Warren David, Ph.D. (American), Instructor in Dendrology (1951).

Camp, Arthur Forrest, Ph.D. (Washington), Vice Director Emeritus, Citrus Experiment Station (1956).

Carson, Cleva J., B.A., Teacher, P. K. Yonge Laboratory School (1947).

Cawthon, William Stanmore, M.A., Associate Professor of History and Political Science (1942).

Clayton, Harold Gray, M.S.A., Director Emeritus, Agricultural Extension Service (1956).

Cockrell, Robert Spratt, LL.B., Professor Emeritus of Law (1940).

Cody, Madison Derrell, M.A., Professor Emeritus of Botany (1956).

Crago, Alfred, Ph.D. (Iowa), Head, Veterans Guidance Center (1950).

Crandall, Clifford Waldorf, LL.B., Professor Emeritus of Law (1949).

Davis, Anne Dorsey, B.S.E., Manatee County Home Demonstration Agent (1954).

Dawson, Charles Ralph, M.S.A., Seminole County Agent (1956).

Debruyn, John William, M.A., Professor of Music (1954).

DeBusk, Ezra Franklin, B.S. Citriculturist, Agricultural Extension Service (1947).

Dolbeare, Harwood Burrows, B.A., Professor of Economics (1955).

Dostal, Bernard Francis, M.A., Associate Professor of Mathematics (1953).

Driggers, Albert Gilchrist, B.S.A., Gadsden County Agent (1956).

Dunn, Charlotte Delia, M.A., Instructor in Education (1950).

Eldridge, John Grady, M.A., Professor of Economics (1954).

Evans, William Edgar, B.S.A., Sarasota County Agent (1949).

Farr, James Marion, Ph.D. (Johns Hopkins), Professor Emeritus of English (1942).

Farris, Lester Collins, M.A., Associate Professor of English (1948).

Fineren, William W., M.E., Research Engineer, Engineering and Industrial Experiment Station (1945).

Finlayson, E. H., Escambia County Agent (1949).

Frash, Edwin Stanton, M.E., Associate Professor of Mechanical Engineering (1954).

Fulford, C. A., Okeechobee County Agent (1945).

Gay, Eunice F., B.A., Brevard County Home Demonstration Agent (1952).

Goette, William Louis, M.A.E., Instructor, P. K. Yonge Laboratory School (1953).

Graham, Klein Harrison, LL.D. (Tampa), Business Manager (1948).

Gratz, Levi Otto, Ph.D. (Cornell), Assistant Director, Agricultural Experiment Station; Plant Pathologist Emeritus (1954).

Gunn, June Rawls, B.S.A.E., Osceola County Agent (1954).

Hathaway, William Byron, M.A., Associate Professor Emeritus of Spanish (1944).

Heist, Anna Eugenia, B.S.H.E., St. Johns County Home Demonstration Agent (1953).

Hume, H. Harold, D.Sc. (Clemson) Litt.D. (Florida), Provost Emeritus for Agriculture; Dean Emeritus of the College of Agriculture (1949).

Lafitte, Elise Nolting, Gadsden County Home Demonstration Agent (1953).

Lafitte, Pearl Garnet, B.S., Duval County Home Demonstration Agent (1953).

Lawton, Albert Sidney, B.S., Duval County Agent (1952).

Lawton, Beverly Eldridge, B.S., Broward County Agent (1955).

Leake, James Miller, Ph.D. (Johns Hopkins) LL.D. (Randolph Macon), Professor Emeritus of History (1950) (Deceased June 26, 1956).

Lowry, William Leonard, B.A., Associate Professor of Journalism (1955).

Maguire, Lillian Irma, M.A., Instructor, P. K. Yonge Laboratory School (1953).

Martin, John Fletcher, LL.B., M.A., Director of Latin American Student Affairs (1952).

McCarty, Martin Edgar, M.A., Assistant Professor of Mathematics (1952).

McDavid, Ruby, District Home Demonstration Agent (1949).

McLendon, Horace S., B.A., Soil Conservationist, Agricultural Extension Service (1953).

Mead, Arthur Raymond, Ph.D. (Columbia), Ed.D. (Miami), Director, Bureau of Educational Research and Professor Emeritus of Education (1950).

Miller, Lucie Kramer, B.S., Lake County Home Demonstration Agent (1954).

Moore, Kingman Colquitt, B.S., Orange County Agent (1946).

Mowry, Harold, M.S.A., D.Sc. (Florida), Director Emeritus of the Agricultural Experiment Station (1950).

Nettles, William Thomas, B.S., District Agent, Agricultural Extension Service (1947).

Newins, Harold Stephenson, M.F., Director Emeritus of the School of Forestry and Professor Emeritus of Forestry (1951).

Noble, Clarence Vernon, Ph.D. (Cornell), Dean Emeritus of the College of Agriculture (1955).

Norman, James William, Ph.D. (Columbia), Dean Emeritus of the College of Education (1955).

Perry, William Sanford, M.S., Associate Professor of Physics (1947).

Powell, Garland Wheeler, Director Emeritus of Radio Station WRUF (1956).

Price, George Sheldon, B.S., Colonel, Artillery, Professor of Military Science and Tactics and Coordinator of Military Departments (1954).

Prigden, Ila Rountree, LL.B., Law Librarian (1955).

Reed, Percy Lawrence, M.S., Professor of Civil Engineering (1945).

Ritchey, George Edgar, M.S., Agronomist Emeritus, Suwannee Valley Experiment Station (1955).

Roesel, Tillie A., M.S.A., Sumter County Home Demonstration Agent (1952).

Rogers, Ruby Rose, M.A.E., Instructor in Education (1949).

Shealy, Arthur Liston, D.V.M. (McKillip), Head Professor Emeritus of Animal Husbandry and Animal Husbandman and Head of Department, Agricultural Experiment Station and Agricultural Extension Service (1949).

Sheely, Walter Jefferson, B.S., Animal Husbandman, Agricultural Extension Service (1949).

Sherman, Harley Bakwel, Ph.D. (Michigan), Professor of Biology (1955).

Simpson, Thomas Marshall, Ph.D. (Wisconsin), Dean Emeritus of the Graduate School and Professor Emeritus of Mathematics (1951).

Skinner, Blanche Estelle, M.A.E., Instructor, P. K. Yonge Laboratory School (1955).

Smith, Arthur Allen, Instructor in Architecture (1952).

Smith, Jesse Lee, District Agent, Agricultural Extension Service (1953).

Spencer, Arthur Percival, M.S., Director Emeritus of the Agricultural Extension Service (1947).

Steffani, Charles Henry, Dade County Agent (1955).

Stevens, Grace Adams, M.A., Instructor in Elementary Education (1950).

Tigert, John James, M.A. (Oxon.), Ed.D., D.C.L., D.Litt., L.H.D., F.R.S.A., LL.D., President Emeritus of the University (1947)

Tisdale, William Burleigh, Ph.D. (Wisconsin), Plant Pathologist Emeritus, Agricultural Experiment Station (1955).

Trusler, Harry Raymond, LL.B., Dean Emeritus of the College of Law (1947).

Vance, Edmund Hume, B.S.A., Hardee County Agent (1953).

Walker, Edgar Smith, B.S., Professor of Mechanical Engineering (1945).

Whitfield, Pearl J., Gulf County Home Demonstration Agent (1945).
Wilder, Bennie F., Madison County Home Demonstration Agent (1952).
Wilkins, Mitchell, B.S.A., Walton County Agent (1953).
Willoughby, Claude Houston, M.A., Professor of Animal Husbandry (1947).
Yeaton, Philip O., B.S., Professor of Industrial Engineering (1947) (Deceased August 18, 1956).
Ziegler, Edwin Allen, M.A., Sc.D. (Franklin and Marshall), Professor Emeritus of Forest Economics and Management (1951).

GENERAL INFORMATION

HISTORICAL NOTE

The University of Florida is a combined state university and land-grant college located approximately in the center of the State. While its beginnings go back to the days previous to Florida's admission to the Union in 1845, its first college — the College of Arts and Sciences — did not open until 1853. A few years later the passage of the Morrill Act, provided lands for state institutions of higher learning which would promote agriculture, mechanical arts, and military science, resulting in the beginnings of the College of Agriculture, the College of Engineering, and the Agricultural Experiment Station.

By 1905 there were a half-dozen state-supported institutions of higher learning in Florida, located in various parts of the State and struggling for existence. At that time the Florida Legislature took a step unprecedented in the history of education in any state by passing the Buckman Act which abolished the six State Colleges and provided for the establishment of two new institutions, of which the University of Florida was one. It was established, for men, at Gainesville and placed under the direction of the Board of Control, a body created by the Buckman Act, composed of seven members representing the seven geographical sections of the State, and serving without compensation, except for travel and incidental expenses incurred in the performance of duty. Under the Constitution of Florida all responsibility for the State educational institutions is vested in the State Board of Education, an ex-officio body composed of the Governor, the State Superintendent of Public Instruction, the Secretary of State, the Attorney General, and the State Treasurer. All acts of the Board of Control are subject to the approval of the Board of Education. In 1947 the University was made co-educational.

SETTING AND ENVIRONMENT

The University of Florida is located on the western part of Gainesville, a city with a population of about 44,500. Situated in the rolling highlands of north central Florida, midway between the Atlantic Ocean and the Gulf of Mexico, the city is fortunate in its natural endowments. Its temperature ranges throughout the year are those of semi-tropical climate, the mean average temperature being 69.9 degrees. Extremes of heat are unknown and frost rarely occurs. These favorable conditions, together with the relatively slight variations in humidity, insure an equable climate that is ideally suited the year round for study, recreation, and rehabilitation.

In addition to its moderate climate, Gainesville offers many other advantages to students of the University. Well known as a winter resort, it is excellently equipped with a wide variety of recreational facilities. The city golf course is within easy reach of the campus, and swimming and boating accommodations are available at nearby springs and rivers. The lakes in the vicinity abound in fresh water fish, while the Atlantic Ocean and the Gulf of Mexico, meccas of deep-sea fishermen, are within a two hours' drive. As the seat of Alachua County, the city is the focal point of diversified industrial and farming activities.

RELIGIOUS LIFE

A modern and well governed municipality, Gainesville has the distinction of being one of the cleanest and most progressive cities in the State. Its people are hospitable and cooperative, and the moral and religious atmosphere is wholesome. Churches that are active include the Presbyterian, Baptist, Lutheran, Methodist, Catholic, Episcopal,

Christian, Seventh Day Adventist, Church of Christ Scientist, Church of Christ, Christian and Missionary Alliance, Advent Christian, B'nai Israel, and Church of the Nazarene. Several of these denominations maintain chapels adjacent to the campus. These include Crane Hall (Roman Catholic), The Baptist Student Union, Wesley Foundation (Methodist), Chapel of the Incarnation (Episcopal), Westminster Fellowship (Presbyterian Student Center), The Church of Christ, B'nai B'rith Hillel Foundation (Jewish), and the Lutheran Student Association. All of the chapels carry on extensive programs of vital interest to University students.

TRANSPORTATION

The city is served by the Atlantic Coast Line Railroad and the Seaboard Air Line Railway. A schedule of daily bus service, with connections to all points in the United States, is maintained by the Florida Motor Lines and Trailway Tour Bus Lines. Eastern Air Lines serves Gainesville with daily flights with connections to all parts of the United States.

ORGANIZATION OF THE UNIVERSITY
GOVERNMENT OF THE UNIVERSITY

Direct supervision over the University of Florida, its policies and affairs is vested in the Board of Control, a body composed of seven citizens from different regions of the state who are appointed by the Governor for a four year term. All actions of the Board of Control are subject to the final approval by the State Board of Education, composed of the Governor, who is chairman, the Secretary of State, the Treasurer, the Attorney General and the Superintendent of Public Instruction, secretary.

University affairs are administered by the president with advice and assistance of the Academic Council and the Administrative Council. The legislative body of the University is the University Senate.

UNDERGRADUATE INSTRUCTION
THE LOWER DIVISION

The University College administers all of the work for the freshman and sophomore years, offering a program which includes the basic comprehensive courses in the major areas of knowledge and the courses prerequisite to the advanced work in the colleges and schools of the Upper Division. Upon the successful completion of the University College program, a student receives the Certificate of Associate of Arts.

THE UPPER DIVISION

The College of Agriculture offers curricula in all of the major fields of agriculture and grants the degree Bachelor of Science in Agriculture.

The College of Architecture and Fine Arts offers curricula in architecture, building construction, interior design, landscape architecture, painting and drawing, commercial art, crafts, costume design, history of art and music, and confers the degrees of Bachelor of Architecture, Bachelor of Building Construction, Bachelor of Landscape Architecture, Bachelor of Design, and Bachelor of Fine Arts.

The College of Arts and Sciences offers curricula leading to degrees of Bachelor of Arts, Bachelor of Science, and Bachelor of Science in Chemistry with opportunities for specializing in all the science and liberal art fields. It gives the courses in mathematics, science, social sciences and humanities required in the curricula of the professional colleges.

The College of Business Administration offers curricular programs leading to the degree Bachelor of Science in Business Administration with specialization in all of the fields of business.

The College of Education has curricula in elementary and secondary school instruction leading to the degrees of Bachelor of Science in Education or Bachelor of Arts in Education. It also conducts an in-service program for the teachers of the state. The P. K. Yonge Laboratory School, a unit of the College of Education, enrolls pupils from the kindergarten through the secondary school.

The College of Engineering offers curriculums leading to the degrees of Bachelor of Aeronautical Engineering, Bachelor of Agricultural Engineering, Bachelor of Chemical Engineering, Bachelor of Civil Engineering, Bachelor of Electrical Engineering, Bachelor of Industrial Engineering and Bachelor of Mechanical Engineering.

The School of Forestry is a unit of the College of Agriculture, offering professional curriculums in Forest Management, Forest Products Technology and Wildlife Management leading to degree Bachelor of Science in Forestry.

The School of Journalism and Communications is a unit of the College of Arts and Sciences. It offers curricula leading to the degrees Bachelor of Science in Journalism, Advertising, and Communications.

The College of Law offers a curriculum leading to the degree Bachelor of Laws.

The College of Nursing is a unit of the J. Hillis Miller Health Center and offers a college level curriculum in nursing leading to the degree Bachelor of Science in Nursing.

The College of Pharmacy, a unit in the J. Hillis Miller Health Center, offers a curriculum leading to the degree of Bachelor of Science in Pharmacy.

The College of Physical Education and Health administers the student Health Service, required physical education programs, intramural athletics and recreation, and offers professional curriculums leading to the degrees — Bachelor of Science in Physical Education for Men; Bachelor of Science in Physical Education for Women; Bachelor of Science in Health Education; Bachelor of Science in Recreation; Bachelor of Science in Physical Therapy.

SPECIAL INSTRUCTIONAL UNITS SERVING ALL COLLEGES AND SCHOOLS

The Department of Music has the responsibility for such musical organizations as the University Bands, Orchestras, Choruses, and Glee Clubs and offers courses in the following areas: (1) Theory of Music, (2) History, Literature and appreciation, (3) Applied Music, (4) Music Education and (5) Ensemble Music.

The Division of Military Science and Tactics offers the four year program of the Army R.O.T.C. Completion of this program by a student leads to his being commissioned in one of the branches of the United States Army Reserve or the Regular Army. Flight (Pilot) training is available for selected Senior Cadets.

The Division of Air Science gives the four-year program of the R.O.T.C. leading to a reserve commission in the Air Force. Young women who concurrently enroll in the advanced AFROTC courses during their junior and senior years are also eligible to be commissioned as second lieutenants in the Air Force.

The Departments of Required Physical Education administer the programs in physical fitness, sports, and other activities required of all students.

GRADUATE INSTRUCTION

The Graduate School offers programs leading to the degrees of Doctor of Philos-

ophy in a number of fields, Doctor of Education, Specialist in Education, Master of Arts, Master of Science, Master of Arts in Education, Master of Arts in Architecture, Master of Science in Community Planning, Master of Science in Building Construction, Master of Fine Arts, Master of Science in Agriculture, Master of Science in Engineering, Master of Science in Forestry, Master of Science in Pharmacy, Master of Business Administration, Master of Agriculture, Master of Education, Master of Physical Education and Health and Master of Rehabilitation Counseling. All instruction is carried on by the faculties of the colleges and schools listed above.

The College of Medicine accepted its first class in September, 1956. It offers a curriculum leading to the degree of Doctor of Medicine and also provides for research and graduate programs leading to the degree of Doctor of Philosophy. Seven departments of the College of Medicine are now engaged in teaching and research in the Medical Sciences Building, the first unit of the J. Hillis Miller Health Center.

STUDENT LIFE

Description of the various services, facilities and activities and regulations concerned with student life will be found elsewhere in the catalog. The Office of the Dean of Student Personnel has the responsibility of coordinating a majority of these factors affecting non-instructional aspects of student life.

INSTRUCTIONAL SERVICE UNITS

The Vice President for Academic Affairs serves as staff officer, advisory to the President, and on orders from the President or in the absence of the President and the Executive Vice President, performs the duties of the President. He assists in the improvement of instruction, the correlating of instructional activities, the adjusting of teaching loads, and in keeping personnel records of the academic staff. The Academic Vice President normally is the first point of contact between all instructional units and the Office of President.

The Board of University Examiners formulates and administers policies governing comprehensive examinations and also determines and administers the requirements for admission to the University.

The Business Manager is responsible for all business activities and financial operations. His responsibilities include the collection and disbursement of funds, purchasing, management of the auxiliary services, control of property, non-academic personnel, auditing and maintenance of the physical plant and grounds of the University.

The School of Inter-American Studies, founded in 1951, combines the functions previously exercised by the Inter-American Institute (dating from 1930) and the Graduate School of Inter-American Studies (created in 1950). The School has the following general aims: (1) To foster international good will among the Americas, (2) to promote the teaching of Western Hemisphere languages and civilization in schools, colleges and Universities, (3) to encourage the exchange of students and professors between colleges and universities of the Americas, (4) to hold conferences and institutes on inter-American affairs, (5) to stimulate research, and the publication of specific studies common to the Americas, (6) to promote an exchange of cultural ideas and ideals, (7) to advance inter-American interests in all fields of human endeavor, and (8) to cooperate with all individuals, organizations, and agencies having similar objectives.

The School is administered by a Director and an Assistant Director appointed by the President of the University. Assisting in the administration of the School are an

Inter-American Committee, concerned with general policy, and a Graduate Advisory Committee and a Special Graduate Faculty concerned with general supervision of master and doctoral candidates. A U. S. Advisory Committee and a Latin American Advisory Committee cooperate with the School in off-campus activities.

The faculty of the School is drawn from all University departments which offer courses having subject matter related in inter-American topics. The School administers an Area Studies program leading to the baccalaureate, masters, and doctors degrees. The School also advises students registered in the several academic departments and divisions of the University whenever they take courses dealing with inter-American subjects. In a word the School attempts to coordinate all of the inter-American activities of the University, both on and off the campus.

The Counselor to Latin American Agricultural Studies aids Latin American students to integrate their American education more completely with actual conditions in their homelands; also, the office gives information to all students interested in Latin American agricultural problems and careers in the tropics. The Counselor is located in Dan McCarty Hall, Room 117.

The Office of the Registrar has charge of the admission and registration of students, the maintenance of academic records, and the issuance of transcripts of student records.

UNIVERSITY OF FLORIDA LIBRARY SERVICE

The University Libraries, comprising the General Library and 11 college, school and departmental libraries, contains more than 700,000 volumes and receive currently about 5,300 serials.

The larger part of the library holdings are shelved in the General Library building where there are four reading rooms with seating space for 1,200 readers. Located on the first floor is the University College Reading Room which has, on open shelves, some 8,000 volumes useful to students in the first two years of college. The Humanities Reading Room and the Social Sciences Reading Room, on the second floor, are designed primarily as centers of library activity for upperclassmen in the humanistic and the social studies. Around the walls on open shelves in each of these rooms are approximately 15,000 books and current issues of learned journals. On the third floor is the Science Reading Room with books and complete sets of journals in psychology, general science, mathematics, physics, geology and geography. Additional facilities in the General Library are the Browsing Room for recreational reading, listening rooms adjacent to the record collection, seminar rooms, and carrells and study cubicles for faculty members and graduate students. The Library offers inter-library loan and photoduplication services to facilitate the use of research material which is not available on the campus.

The Library collection is particularly strong in Floridiana, with research centered in the P. K. Yonge Library of Florida History, which is located on the first floor of the General Library. In recent years, special emphasis has been placed on developing the Library's resources for Latin-American Studies, especially those pertaining to the West Indies and the Caribbean area. Other special collections include: the Marjorie Kinnan Rawlings Collection, consisting of manuscripts, typescripts and memorabilia of one of America's most distinguished novelists; the Collection of Creative Writing, comprising worksheets, manuscripts, and other literary papers of significant contemporary American and British authors; and the Dance and Music Archives, an extensive collection of pictures, programs, photographs and other documentary material relating to the lyric theater.

Libraries for the College of Agriculture, Architecture and the Fine Arts, Chemistry, Pharmacy, Education, Engineering, Forestry, Health Center, Health and Physical Education and Law are located in or near the buildings which house the corresponding instructional units. The library serving the extension activities of the University is located in the Seagle Building. The P. K. Yonge Laboratory School Library serves the Laboratory School.

The General Library is open Monday through Friday from 8:00 A. M. to 10:00 P. M. On Saturday the hours are from 8:00 A. M. to 5:00 P. M., on Sunday from 2:00 P. M. to 5:00 P.M. and from 7:00 P. M. to 10:00 P. M. The University College Reading Room is open until midnight daily except Friday and Saturday. When holidays change the regular hours, a special schedule is posted.

GENERAL STATE AND UNIVERSITY AGENCIES

The Agricultural Extension Service selects, prepares, and disseminates information derived from research and observation on agricultural and home economic subjects. The Service includes county and home demonstration agents who carry on educational programs in 66 Florida counties. These programs teach the practical application of research information. Specialists in subject matter fields keep the agents informed on new research developments. The programs of this service are coordinated with similar programs of federal agencies.

The General Extension Division organizes and supervises extension classes, correspondence courses, workshops, conferences, and short courses for professional educational, occupational, and cultural groups; provides loan collections of books and audio-visual aids; and maintains adult education consultation services for individuals and organizations. The Division also serves the Florida State University and the Florida Agricultural and Mechanical University. The faculties of all three institutions participate in its programs.

The Division of Public Relations coordinates the work of interpreting the University's aims, policies and needs through the media of newspapers, radio, television, motion pictures, special brochures, photographic displays, and exhibits.

The Division of Alumni Affairs maintains contact with alumni of the University and coordinates the activities of the various local alumni clubs. It publishes the Florida Alumnus, a quarterly magazine containing news items about alumni and University activities.

The Florida State Museum was created by an act of the Legislature in 1917 as a department of the University of Florida.

The Museum exhibition halls occupy the first two floors of the Seagle Building, a ten-story office building located in downtown Gainesville about a mile from the campus. These halls are open to the public from nine-thirty until five o'clock every day except Sundays and major holidays when they are open from one to five o'clock. There is no admission charge. The Museum is frequently used by University and public school classes and has been visited by over 60,000 persons annually in recent years.

About 3,000 specimens (comprising less than one percent of the Museum's holdings) are on display. The first floor is divided into two exhibit areas, Florida Archeology and Transportation. The archeological display includes pottery and stone artifacts of the early Indian tribes of Florida. In the Transportation display is an historic series of transportation items used in the State, including a scale model of the U.S.S. *Florida*. On the hallway of the second floor will be found historical items including jewelry, old-world relics, documents, etc. The main display room on the second floor is the Hall of Ornithology. In this room are 26 large cases showing Florida birds in their natural

habitats. There are also displayed mounted birds, eggs, and nests with a world-wide coverage. The newest exhibit in the Hall is of the crocodilians of the State, both fossil and recent. There is also a display of the Ice Age animals of Florida.

The third floor and some space in Flint Hall are used for offices and for the storage of the research collections which now total approximately one-half million items. The collections are under the care of curators who encourage the scientific study of the Museum's holdings. Material is constantly being added to the collections both through gifts from friends and collecting by staff members. The archeological collections and egg collections are especially noteworthy. There are also study collections of birds, mammals, insects, mollusks, reptiles, amphibians, fish and vertebrate fossils. The latter seven collections are being cooperatively maintained by the Museum and Department of Biology. Opportunities are provided for students, staff, and visiting scientists to use the collections. The Board of Associates, which is comprised of faculty members with strong interests in the research collections, serves to promote the proper utilization of Museum materials. Field work is presently sponsored for archeological, paleontological and zoological specimens.

The Museum has been constructing local museums for the State Parks. The Museum also loans scientific specimens to other investigators; exchanges exhibit materials with other institutions; and carries on most other functions normally associated with a public and university museum.

The University Center of the Arts selects and presents exhibitions of contemporary work in the visual arts. It serves students, faculty, and the general public by bringing together examples of the best contemporary work in architecture, community planning, crafts, furniture, industrial design, painting, and the other arts.

WRUF, State and University of Florida Radio Station, operates on 850 Kilocycles with a power of 5,000 watts. WRUF-FM operates on 104.1 megacycles with a radiated power of 12,000 watts. They are both affiliated with the Mutual Broadcasting System and originate the University of Florida network. WRUF has one of the largest recorded libraries of any radio station in the country, and has the AP news service and the Langworth and Thesaurus Libraries.

One of WRUF's more important functions is that of furnishing practical experience to students enrolled in the radio programs of the University. The extent to which this policy is applied is demonstrated by the fact that the operating personnel of WRUF consists almost entirely of University students specializing in radio work, and the effectiveness of this training is demonstrated by the nation-wide reputation which WRUF has achieved for the developing of some of this country's leading announcers and radio executives. The various radio curricula in addition to proving this practical operating experience require a selection of courses from many of the departments of instruction of the University. The student is taught an awareness of the social obligations placed on any medium whose purposes include public entertainment, information, education, and cultural advancement. He is given the broadest possible background, to the end that the social implications of radio as a medium for influencing the public may be recognized and acted upon. These are important aspects of the program and should be the beginning of the building of a breadth of viewpoint on the part of the student which he will continue to cultivate by reading and study after he has completed the training program.

WRUF and WRUF-FM employ approximately twenty to thirty students in their operations which gives these students commercial operation experience as WRUF is a commercial non-tax supported auxiliary of the University of Florida.

All student personnel used by Stations WRUF and WRUF-FM are selected and

hired on the basis of necessity on the part of the Stations and talent, attitude, fitness for job and future college program on the part of the students, as determined by personal interview and/or open auditions with and for the Stations' executive personnel. Open auditions are announced publicly, however preference is given those applying who plan future activity in broadcasting.

The University of Florida Press. The purpose of the University Press is to encourage, seek out, and publish original and scholarly manuscripts which will aid in developing the University as a recognized center of scholarship and research.

The Press edits and publishes scholarly books and monographs under its own imprint, as well as addresses, pamphlets, reports, and bulletins for special purposes. It has no responsibility for, or connection with, the editing and publishing of official university publications such as the University Record Series, the publications of the Agricultural Experiment Station, the Agricultural Extension Service, and the Engineering and Industrial Experiment Station.

The Board of Managers of the Press has the sole responsibility for accepting and rejecting manuscripts offered for publication.

ORGANIZED RESEARCH

The Office of Contract Research has been established for the purpose of coordinating the relationships of the University with outside agencies interested in the sponsorship of fundamental and applied research. All proposals for the sponsorship of research or for grants-in-aid must receive the approval of the Director of Contract Research. Subsequent negotiations with potential contracting agencies or sponsors of research projects are carried on under the Director. All contracts are subject to the final approval of the Board of Control.

The Agricultural Experiment Station, a department of the University and the state's only agricultural research institution, is responsible for research leading to the improvement of all phases of Florida's widely varied agricultural production. The station system includes 10,725.93 acres in 16 areas of Florida, located at the Main Station, Gainesville, 7 field laboratories and 9 branch stations, the whole operating as an integral unit. Certain phases of the research program are cooperative with the United States Department of Agriculture and other federal departments and state agencies.

Research at the Main Station is conducted within 15 departments—agricultural economics, agricultural engineering, agronomy, animal husbandry and nutrition, dairy science, entomology, botany, food technology and nutrition, fruit crops, ornamental horticulture, vegetable crops, plant pathology, poultry husbandry, soils, and veterinary science. In addition to the above the Main Station has three units vital to its research programs, namely, editorial, library and maintenance and operations.

The field laboratories and branch stations, their locations and scope of investigations, are as follows:

Field Laboratories:

Indian River Field Laboratory, Ft. Pierce. Citrus and vegetable culture.

Old Plantation Field Laboratory, Ft. Lauderdale. Vegetables, soil and pastures.

Pecan Investigations Laboratory, Monticello. Pecan insect and disease control.

Potato Investigations Laboratory, Hastings. Culture and pest control of potatoes and cabbage.

Strawberry Investigations Laboratory, Plant City. Culture and disease control of strawberries.

South Florida Field Laboratory, Immokalee. Vegetable culture.

Watermelon Investigations Laboratory, Leesburg. Culture and disease control of watermelons and grapes.

Branch Stations:

Citrus Station, Lake Alfred. All phases of citrus production and handling.

Central Florida Station, Sanford. Culture and pest control of vegetables.

Everglades Station, Belle Glade. Specialized agriculture, including livestock, of the Everglades area.

Gulf Coast Station, Bradenton. Culture and pest control of vegetables and gladiolus.

North Florida Station, Quincy. Shade tobacco, farm crops, and livestock.

Range Cattle Station, Ona. Beef cattle production, pasture development and management for range conditions.

Sub-Tropical Station, Homestead. Sub-tropical fruits and winter vegetable production on the lower east coast.

Suwannee Valley Station, Live Oak. Tobacco, cover crops, pasture development and management.

West Florida Station, Jay. General farm crops, pasture and livestock management for extreme West Florida.

The Florida Agricultural Experiment Station is cooperating with the West Central Florida Station, Brooksville, a USDA field laboratory, in its beef cattle and pasture production and management programs, and with the United States Weather Bureau, Lakeland, in the Federal-State Frost Warning Service for fruit and vegetable producers and shippers.

Results of the research of the Agricultural Experiment Stations are published in scientific journals, reports, and bulletins. The latter are available to Florida residents without charge.

The Florida Engineering and Industrial Experiment Station is not only the research division of the College of Engineering but it is also the development laboratory for the industries of the State. It was officially established in 1941 by the Legislature as an integral part of the College of Engineering "to organize and promote the prosecution of research projects of engineering and related sciences, with special reference to such of these problems as are important to the industries of Florida."

The facilities of the Station include all the equipment of the College of Engineering, now valued at more than $3,000,000, not including government owned equipment. The Station also has available for its use the laboratories, staff and facilities of other divisions of the University. Because of the close relations that exist between teaching and research activities, students secure much practical information about engineering and industrial problems which would normally not be encompassed in a collegiate program.

The Station receives only a small portion of its operating revenue from the State. The remainder is derived from contracts with federal agencies and industrial organizations. Large and small manufacturers avail themselves of one of the finest research laboratories in the Southeast. Among the outstanding laboratories, in addition to a well equipped shop, are those in Public Health Engineering; Electronics; Ionics; Metallurgy; Chemical Engineering; Air Conditioning; Soil Mechanics; Electrical Machinery; Paper, Pulp, and Wood Products Utilization; Farm Mechanization; Corrosion; Aircraft Model Wind Tunnel; Reinforced and Pre-stressed Concrete; and Hurricane Tests of Building Material.

Nuclear reactors for training and research are being provided to support the nuclear engineering program of the College of Engineering. The exponential pile (pickle

barrel) reactor is in use as an instructional facility. It is planned to have a training reactor in operation during the academic year. These facilities will allow the College to continue its efforts in the field of nuclear engineering.

The Bureau of Architectural and Community Research is one of the activities of the College of Architecture and Fine Arts.

The Bureau of Economic and Business Research is the Research Division of the College of Business Administration. A major part of the work of the Bureau is to provide economic and business information about Florida. By published reports of special research and through the monthly *Economic Leaflets* (sent free to any resident of Florida upon request) the results of research work are available to all residents of Florida. Consultant services are rendered the business community, civic groups, and government. The Bureau makes it possible for teaching professors to engage in organized research and provides research training for graduate students.

The Naval Stores Research Laboratory conducts basic research on the methods of purification, determination of physical and thermodynamic properties, and the nature of reactions of the compounds contained in naval stores. Inasmuch as the chemistry of these compounds is similar to the compounds dealt with in the citrus industry, the program is designed to aid both of these important Florida industries. The organization is under the jurisdiction of the Department of Chemistry. Special research assistantships are available.

The Public Administration Clearing Service is a research, training, and service adjunct of the Department of Political Science in the College of Arts and Sciences. It carries on a continuous program of research on public policy matters in Florida; it provides consulting services to state, county, and local governments in Florida; it publishes research and surveys of governmental and administrative problems in both popular and scientific monograph form. In broad areas of public policy and public service training, it works in cooperation with other units of the University. With the General Extension Division, it cooperates in the planning and conduct of training programs and annual short courses for public officials and employees, such as the Short Course for City Managers and the City Clerks and Municipal Finance Officers' Short Course.

Cancer Research Laboratory. With the cooperation and assistance of the Damon Runyon Cancer Fund, the Anna Fuller Fund, the United Public Health Service, the American Cancer Society, the U. S. Atomic Energy Commission, the Elsa U. Pardee Foundation, the Florida Division of the American Cancer Society, and several private gifts and bequests, the University is carrying on a number of research projects in the cause, diagnosis and treatment of cancer.

Statistical Laboratory. The laboratory regularly furnishes consulting, punch card and other computing services to research projects of graduate students, faculty and staff, as well as to governmental and other agencies. The laboratory is a separate budgetary unit of the University and reports to the President through the Dean of the Graduate School.

THE J. HILLIS MILLER HEALTH CENTER

The Medical Sciences Building, the first unit of the J. Hillis Miller Health Center, now houses the College of Medicine and the College of Nursing, and as of September, 1956, fifty medical students and forty-five nursing students were enrolled in the first class of their respective colleges.

This building is the first of four proposed buildings in the Health Center plan and is the concrete realization of a series of careful studies started when the Florida

Legislature of 1949 directed the University of Florida to develop schools of medicine and nursing. The purpose of the studies was to determine how the State of Florida might best be served by the University in providing health and medical services to the State.

A faculty committee of 20 persons, representing every branch of the University having direct relations with the projected health program, gave long and careful study to the fundamental issues and proposed a tentative program of research on the health needs and resources of the State of Florida. This was presented to the Commonwealth Fund, and in April, 1952, the Fund awarded a generous grant to carry out the study.

From the results of this research, there evolved a farsighted program projected over the next 20 years. In bestowing the grant during the presidency of the late Dr. J. Hillis Miller, the Commonwealth Fund said, "The University of Florida is thinking like a university. Charged by the state legislature to develop schools of medicine and nursing in a medical center, it has taken steps to fit the center not merely to the university matrix in which it will operate, but to the state whose health needs it must serve. . . . The time is short and the task ambitious, but the effort to think out what a medical school ought to be and do before a staff is hired and building plans are fixed is all but unheard of in the recent history of American medical education."

The Health Center initially includes the College of Medicine, the College of Nursing, the College of Pharmacy and the Cancer Research Laboratory. In 1953 the Florida Legislature made the initial appropriation to begin construction on the first unit, the Medical Sciences Building, now completed. In 1955 the Legislature made its second appropriation for the 400 bed teaching hospital and out-patient clinic adjacent to the Medical Sciences Building and which will be completed by the fall of 1958.

SUMMER SESSION

During the summer months the University operates an eight weeks Summer Session. The Summer Session provides a means for acceleration of program for the students of the Regular Session with a selected list of offerings from each of the Colleges and Schools.

The Summer Session offerings of the College of Education are expanded to include additional courses and the offerings of many departments in other colleges are to provide both graduate and undergraduate courses especially helpful to teachers in both the elementary and secondary fields. Detailed information is given in the Bulletin of the Summer Session which is usually published in April.

SOUTHERN REGIONAL GRADUATE SUMMER SESSION IN STATISTICS

At the request of the Southern Regional Education Board's Advisory Commission on Statistics, the University of Florida, the North Carolina State College, Virginia Polytechnic Institute, and Oklahoma Agricultural and Mechanical College have initiated a continuing program of graduate summer sessions in statistics to be held at each of the four institutions in rotation beginning in the summer of 1954. The 1957 summer session is scheduled to be held at Virginia Polytechnic Institute, and the 1958 session is scheduled to be held at Oklahoma Agricultural and Mechanical College. Each of the sponsoring institutions will accept the credits earned by students in the summer sessions as residence credit. The courses are arranged to provide consecutive work in successive summers and are of six weeks' duration. Information regarding these courses may be obtained from any of the cooperating statistical departments or the Deans of the Graduate Schools concerned.

ADMISSIONS

GENERAL STATEMENT

The Admission Requirements have been arrived at after a very careful study of the experiences of thousands of students over a long period of years. In every case they are minimum requirements that have evolved from studies of student performance at the University of Florida. These studies have had as a primary objective the identification of factors that would indicate a reasonable chance for successful completion of University work.

The Board of University Examiners is the agency responsible for administering all admissions to the University and its various components.

Students who are planning to enter the University of Florida for the first time will be considered for admission as follows:

Freshmen (those who have never attended any college)

1. If the student is entering the University from high school and has not attended college, he will be considered for admission to the University College. (See Section I)

Undergraduate Transfer Students

2. If the student is transferring to the University from another college or university and is presenting less than 64 semester hours of acceptable college credit for advanced standing, he will be considered for admission to the University College. (See Section II).
3. If the student is transferring to the University from another college or university and is presenting 64 semester hours or more of acceptable college credit as advanced standing toward a baccalaureate degree, he will be considered for admission to the Upper Division school or college of his choice providing his record indicates the completion of college work approximately equivalent to the comprehensive courses offered by the University of Florida in the areas of the Social Sciences, the Physical Sciences, English, the Humanities and the Biological Sciences. (See Section III)

Graduate Students (candidates for Master's or Doctor's Degrees)

4. If the student wishes to pursue graduate studies and has been graduated from an accredited college or university, he will be considered for admission to the Graduate Division. (See Section IV)

Medical Students (See Section V)

Law Students (See Section VI)

ADMISSION TO THE UNIVERSITY COLLEGE

Section I Freshmen (Applicants who have never attended college)

A. Graduates of Florida High Schools:

1. Graduation from an accredited high school is required. No specific units are required but students expecting to apply for admission to the University are advised to emphasize in their high school programs the following subjects: English, social studies, mathematics, foreign languages and the natural sciences.
2. Minimum Standing on the Placement Tests of the Florida 12th Grade Testing Program. All applicants must take the placement tests before being admitted to the University. These are achievement tests in the fields of English, mathematics, social studies, and natural sciences. Attainments in these fields are possible without specific high school courses and are not guaranteed by the

acquiring of certain high school units. Graduates of accredited Florida secondary schools who attain scores on the Florida State-Wide 12th Grade Testing Program tests which place them above the scores attained by the lowest 40% of the high school seniors of the state are academically eligible for admission. The University may re-test any applicant prior to admission to validate the scores attained in the State Program.

3. High school graduates who do not meet the above requirements may apply for special consideration. In each case the application will be considered on an individual basis, and any, or all, or any combination of the following types of evidence may be used in appraising the eligibility of the student for admission to the university: a personal interview, grades and rank in class, reference to the student's cumulative high school files, recommendation of the high school principal, and/or review of the results of tests already given or requested by the university admissions committee. After reviewing the evidence called for, the Board of University Examiners may grant or deny admission. In such cases the University will give considerable weight to results on such other tests as are recommended by the Board of Examiners.
4. Non-Florida students entering the University as first time freshmen must, in addition to meeting the requirements stated in 2., above, have graduated from an accredited high school with standing in the upper half of their graduating class. They must also present recommendations from the high school principal or school superintendent. Non-Florida applicants are urged to take the College Entrance Board Examinations, the results of which can be satisfactorily compared with the tests of the Florida Program so as to avoid the expense for coming to Gainesville to take the Florida Tests.

*Section II Transfer Students**

1. *Honorable Dismissal.* The student must be eligible to return to the institution last attended. Students who *for any reason* will not be allowed to return to the institution last attended cannot be considered for admission.
2. *Satisfactory record.* All transfer students must have made an average of C or higher on all work attempted at all institutions previously attended to be considered for admission.
3. Undergraduate transfer students shall be required to make a satisfactory score on a general ability test.
4. The University of Florida accepts on transfer only those courses completed at other institutions with grades of C or higher.

ADMISSION TO THE UPPER DIVISION

From the University College:

See elsewhere in this bulletin the various programs of the University College and the specific requirements listed under the curricula of the several colleges and schools.

Section III Transfer Students

1. *Honorable dismissal from the institutions previously attended.* An applicant for admission who for any reason is not eligible to return to the institution last attended cannot be considered for admission.

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*The student who has matriculated at any college or university, regardless of the amount of time spent in attendance or credit earned, is regarded as a transfer student.

2. *An average of C or better.* The average grade for all work attempted at other institutions must be C or better. An average grade of C or better is required for graduation from the University of Florida, and one who has not maintained this average before coming to the University need not apply.
3. A minimum of 64 semester hours accepted as transfer credit (only those courses completed at other institutions with grades of C or higher) not more than four of which are in Military Science or Physical Education.
4. *Specific course requirements for the professional school of the applicant's choice.* The courses listed as required for admission to the Upper Division under the various curricula or acceptable substitutes must be offered as advanced standing to qualify the student for admission to the Upper Division. An applicant lacking some of these requirements may be permitted to enroll in the Upper Division and complete them without reducing the credits required in the Upper Division for a degree. In some cases the student may be required to enroll in the University College until these requirements are met.
5. Undergraduate transfer students shall be required to make a satisfactory score on a general ability test.

Section IV—ADMISSION TO THE GRADUATE DIVISION

Limitations of space and staff restrict the enrollment of graduate students. The records of applicants for graduate study are reviewed by the graduate selection committees of the various colleges and schools. In general no student will be considered for graduate study in any unit of the University who is a graduate of a non-accredited institution. Unqualified admission to the Graduate School for study toward all degrees except those in the College of Education and the College of Physical Education and Health is dependent upon presentation of an undergraduate record from an accredited college or curriculum with an average grade of "B" for the junior and senior years. All applicants are required to make a satisfactory score on the Graduate Record Examination before admission to the Graduate School can be granted.

Section V—ADMISSION TO THE COLLEGE OF MEDICINE

(See also more detailed description in the section of the *Catolog* headed College of Medicine.)

Specific Courses

The basic scientific knowledge required for admission is intended to give the student working familiarity with general principles rather than excellence in the performance of techniques. Unless specified to complete the requirement for a degree, science courses which will be repeated in the medical curriculum in more exhaustive fashion should not be selected. The number of hours and the content of courses in the preprofessional curriculum will vary from one college to another, but in general the required material will be covered in courses which total the following number of hours. Laboratory work must be included in each of the disciplines.

Minimum requirements:

Biology 8 semester hours
Chemistry 16 semester hours
Physics 8 semester hours

Elective Courses

The remainder of the college work should be distributed throughout various courses in the humanities or social, biological and behavioral sciences. A broad liberal education is the best foundation for the study of medicine. The student should select subjects which intellectually stimulate him and contribute to his development

as a well-rounded and balanced individual who is adjusted to society for the practice of his art. The discriminate selection of elective courses not only increases the store of knowledge, but forms attitudes which are basic to a professional career.

Proficiency in certain skills should be achieved before the professional education is begun. Accurate communication by written and spoken language is required. A grasp of quantitative concepts and skill in techniques of accurate observation, measurement, interpretation and evaluation of natural phenomena are necessary. An understanding of people and appreciation of the interaction of individuals intellectually and emotionally with their environment, and development of skill in interpersonal relations is essential.

Students who have failed academically, or are ineligible to continue in a medical or other professional school will not be admitted.

No transfer students will be accepted for advanced standing in work leading to the M.D. degree. Graduate students in the basic medical sciences apply through the Graduate School.

Additional Requirements

1. An acceptable score on the Medical College Admission Test. The applicant should have taken the test by the spring preceding the submission of his application.

2. A personal interview after preliminary screening and before final acceptance. The time of the interview will be arranged by the College with the applicant. Married students should bring their wives.

3. Each application must be accompanied with a fee of $10.00 which is not refundable.

Section VI—ADMISSION TO THE COLLEGE OF LAW

Applicants for admission to the College of Law must have received a 4-year baccalaureate degree from a college or university of approved standing.

Under existing legislation veterans who present honorable discharges which show not less than 90 consecutive days of active service in the U. S. Army, Air Force, Coast Guard, Navy or Marine Corps may enter after they have completed 94 hours of college work meeting the standards of the Association of American Law Schools. A veteran who has not received a degree must have made an average of C or higher in all work undertaken prior to entrance in the College of Law. For information on admissions to the College of Law with advanced standing see the section of the catalog headed College of Law.

All applicants for admission as beginning students must take the Law School Admission Test given by the Educational Testing Service.

Section VII
ADMISSION REQUIREMENTS FOR SPECIAL STUDENTS

Special students may be admitted to the various schools and colleges of the Upper Division only by approval of the Board of University Examiners. Each case will be considered on an individual basis. Application for admission as a special student must include: (1) records of previous educational experience (high school or college transcripts); (2) a statement as to the type of studies to be pursued; (3) a brief statement of the reason or reasons for selecting a special program other than a regular one; (4) satisfactory evidence of ability to pursue these studies—for example, a student to enroll as a special student for some technical courses and who feels qualified to do so by reason of employment or other experience should submit a brief description of this experience. (5) Satisfactory scores on such ability or achievement tests as may be prescribed in individual cases by the Board of Examiners.

EXPENSES

REGISTRATION FEES AND TUITION

Each student, depending upon his classification, pays one of the following registration fees each semester, if registration is completed in the regularly scheduled registration period (see University Calendar). Fees for the summer are listed in the Summer Session bulletin.

Florida Students enrolled in all colleges and schools (excludes State Forest Ranger School)	$ 75.00
Part-time Florida Students enrolled for only one course (the course not to carry more than 4 semester credit hours) (such students are not entitled to student activity or infirmary privileges)	20.00
Non-Florida Students enrolled in all colleges and schools (excludes State Forest Ranger School)	250.00
Non-Florida Part-time Students enrolled for only one course (the course not to carry more than 4 semester credit hours) (such students are not entitled to student activity or infirmary privileges)	195.00
Florida and non-Florida Students enrolled for thesis only (not to exceed four semester credit hours) (such students are not entitled to student activity or infirmary privileges)	20.00
Florida Students enrolled at State Forest Ranger School	85.00
Non-Florida Students enrolled at State Forest Ranger School	270.00
Fees for registration after the regular registration period are increased	5.00

There are no waivers of the increased fees for any reason.

DESCRIPTION OF REGISTRATION FEES

UNIVERSITY:

The registration fee for a student enrolled for more than four semester hours is as follows:

Contingent Fee. A fee of $41.50 per semester is charged each student.

Building Fee. A fee of $9.00 per semester is charged each student, the income being used for building construction and rehabilitation.

Student Health Fee. Each full-time student is charged a Health Fee of $10.00 per semester, which secures for the student the services of the Infirmary staff. Additional charges are made for board at the rate of $2.20 per day. Consultation, special duty nursing, special medicines, special treatments, special laboratory work and X-ray interpretation by a qualified Radiologist are all services not covered by this fee and an additional charge is made for them. No major surgery is performed at the Infirmary except in an extreme emergency, and therefore all expenses incurred for major surgery or any other *referred* service are the responsibility of the student and his parents.

Student Activity Fee. A fee of $14.50 per semester is assessed to maintain and foster athletic sports, student publications, and other student activities. Student fees are assessed by a vote of the student body and approved by the Board of Control before they are adopted.

STATE FOREST RANGER SCHOOL:

The registration fee listed in the above table for the State Forest Ranger School includes the following:

Contingent Fee. A fee of $33.00 per semester is charged each student.

Building Fee. A fee of $6.00 per semester is charged each student, the income

being used for building construction and rehabilitation.

Hospitalization. A fee of $10.00 per semester is charged which covers cost of membership in an approved hospitalization insurance plan with hospitalization and surgical benefits as set forth in the insurance policy.

Student Activity Fee. A fee of $8.00 per semester is assessed for student activities. This fee includes admission fees to all intercollegiate games at the University of Florida.

Transportation. A fee of $28.00 per semester is assessed to cover student expense in making necessary field trips.

DESCRIPTION OF TUITION

Non-Florida students pay tuition of $175.00 per semester in addition to the fees charged Florida students.

Classification of Students. For the purposes of assessing tuition applicants are classified as Florida or non-Florida students. In applying this regulation "applicant" shall mean a student applying for admission to the University of Florida if he is 21 years of age, or if he is a minor, it shall mean parents, parent or guardian of his or her person. Such applicant will pay the non-Florida tuition and other charges required of non-Florida students unless he shall be a citizen of the United States and shall have resided and had his habitation, domicile, home, and permanent abode in the state of Florida for at least 12 months immediately preceding his registration; provided, however, that the applicant can not claim continuous residence in Florida by enrollment in any college or university in the State of Florida for the required period.

All students not able to qualify as Florida students are classified as non-Florida students.

The status of the classification of a student is determined at the time of his first registration in the University, and may not thereafter be changed by him unless, in the case of a minor, his parents move to and become legal residents of this State by maintaining such residence for twelve consecutive months. If the status of a student changes from a non-Florida student to a Florida student, his classification may be changed at the next registration thereafter.

A fee of $10.00 will be charged all students registering incorrectly. In the case of non-Florida students this fee will be assessed in addition to the tuition. In the case of Florida students who give an out of state address at the time of registration or any other time, this fee will be charged unless the student files a written explanation acceptable to the Registrar stating why the out of state address was given and giving proof that his residence is Florida.

COURSE FEES

Course fees are assessed for students enrolled in the College of Medicine, applied music courses, and equitation.

COLLEGE OF MEDICINE COURSE FEES:

College of Medicine students pay in addition to the registration fee and tuition, special course fees per semester at the time of registration as follows:

Florida Students medical course(s) fee $225.00
Non-Florida Students medical course(s) fee 350.00

DEPARTMENT OF MUSIC COURSE FEES:

Fees for applied music lessons, instrument rental, and practice room rental are payable at the time of registration.

No deduction will be made for lessons missed by the student. In case of serious illness, makeup lessons will be arranged in the Department of Music office. Lessons

missed because of University holidays or during examination week will not be rescheduled.

Applied Music Lesson Fees

One lesson per week, one-half hour .....$30.00 per semester
Two lessons per week, one-half hour each ..... 60.00 per semester

Practice Room Rental Fees

One hour per day for the semester .....$ 5.00
Two hours per day for the semester 10.00
Three hours per day for the semester 15.00

Instrument Rental Fees

Brass, woodwind and string instruments owned by the University may be rented by students at the rate of $5.00 per semester.

EQUITATION COURSE FEE:

A fee of $60.00 per semester is required of all students who register in classes in equitation. These classes are given through the Department of Physical Education for Women. If a student is forced to discontinue the course for reason of illness, injury or other reason beyond his control he shall be entitled to a refund of fees, proportional to the number of uncompleted instructional periods.

SPECIAL FEES

Fees which apply in special cases only are listed below:

Breakage Books. Any student registering for a course requiring locker and laboratory apparatus in any department is required to buy a breakage book. Breakage books cost $3.00 or $5.00 each as determined by the department and laboratory concerned. A refund will be allowed on any unused undetached coupons at the end of the year, when the student has checked in his apparatus to the satisfaction of the departments concerned. Breakage books are sold in the Student Bank.

Graduate Record Examinations. The Aptitude Test of the Graduate Record Examinations is required for admission to the Graduate School. A fee of $8.00 covers the cost of this examination. Students who take one of the Advanced Tests of the Graduate Record Examinations in combination with the Aptitude Test pay a fee of $12.00. For further information see the Graduate School Section of this catalog.

College of Law Admission Test Fee. See Requirements for Admission, College of Law Section, in this catalog for details. A fee of $10.00 is charged by the Educational Testing Service for this test that must be taken by all applicants for admission as beginning students.

College of Medicine Application Fee. A $10.00 application fee must be forwarded with an application for admission to the College of Medicine. This fee is not refundable. See application procedure in the College of Medicine section in this catalog.

Application Fee for Comprehensive Examination. A non-refundable fee of $1.00, payable on the day of application, is charged for each application for a comprehensive examination in one of the basic courses of the University College Program. Applications are necessary only in case the student is not currently registered in the course concerned. Forms may be secured from the Registrar.

Graduation Fee. Each candidate for a Bachelor's degree must make application for the degree in accordance with the date set forth in the University Calendar and pay at the time of application, the graduation fee of $10.00. This will cover the cost of the candidate's diploma and rental of cap and gown. If the candidate applies for two Bachelor's degrees at the same commencement, the fee will be $15.00. In the

event that the applicant does not fill the requirement for graduation at the time specified in the original application for degree, he shall be charged a fee of $5.00 for each subsequent application for the same degree.

Each candidate for a graduate degree (Master's, Specialist's or Doctor's) must make application for the degree in accordance with the date set forth in the University Calendar and pay at the time of application a fee of $20.00. This will cover the cost of the candidate's diploma, rental of a cap and gown, thesis binding fee, and cost of printing cover and title page of thesis. The candidate will also be given the hood representative of his degree. In the event that the applicant does not meet the requirements for graduation at the time specified in the original application for degree, he shall be charged a fee of $5.00 for each subsequent application for the same degree.

Transcript Fee. A student is furnished a first copy of his record free (regardless of the amount of work completed). Subsequent copies are charged for at the rate of $1.00 each, unless more than one copy is ordered at the same time, in which case there is a charge of $1.00 for the first copy and 25 cents for each additional copy on the same order. University transcripts may be obtained only from the Registrar's Office.

Library Fines. A fine of 5 cents a day is charged for each book in general circulation which is not returned within the limit of two weeks. "Reserve" books may be checked out overnight, and if they are not returned on time the fine is 15 cents for the first hour and 5 cents an hour or fraction of an hour thereafter until they are returned.

Late X-ray Fee. A fee of $2.00 will be charged all students who report late for their chest X-ray.

Audit Fees. Persons may be permitted to audit courses with the written consent of the instructor in charge and with the approval of the dean of the college administering the course on payment of a fee of $20.00 per course.

Auditor's permits are obtained at the Office of the Registrar.

No grades are recorded for Auditors. No one is permitted to audit courses without payment of the fee.

DEPOSITS

College of Medicine Acceptance Deposit. Upon receipt of a regular acceptance of admission a deposit of $50.00 must be made within two weeks. This deposit will be credited toward the payment of course fees for the first semester to which the applicant is admitted. It is refundable only until January 15 of the calendar year in which that semester begins. It cannot be credited toward a subsequent admission.

Housing Reservation. Students wishing to apply for space in University Housing Facilities must forward to the Director of Housing a Reservation Deposit of $10.00 at the time such application is made.

R.O.T.C. Deposit. All students enrolling in Military Science and Tactics are issued regulation uniforms and other military equipment necessary. To provide against loss and insure prompt return, each student enrolled in any R.O.T.C. course is required to make a deposit of $20.00 at the time of registration. This will be refunded upon return of all Government property in satisfactory condition.

Dissertation Deposit. A deposit of $50.00 is made to cover the cost of publishing the dissertation. See the Graduate School section of this catalog for choices for publishing the dissertation which involves the disposition of this deposit.

State Forest Ranger School Application Deposit. A deposit of $20.00 must be forwarded at the time the admission documents are submitted. This deposit, after

registration is completed, is held as a security deposit for Ranger School dormitory and instrument damage and breakage. The deposit is refunded at the close of the State Forest Ranger School year.

PAYMENT OF FEES AND DEPOSITS

Fees and tuition are ordinarily payable as a part of the registration procedure, with certain exceptions. The non-Florida tuition for the first semester of attendance must be sent with admission credentials.

College of Medicine applicants must submit the $10.00 application fee with the completed application for admission form. The $50.00 College of Medicine acceptance deposit must be forwarded within two weeks of the receipt of acceptance of admission certificate, as is outlined in the College of Medicine section of the catalog.

The Housing Reservation Deposit of $10.00 must accompany the application for space that is sent to the Director of Housing.

The R.O.T.C. deposit of $20 is payable at the time of registration.

The State Forest Ranger School admission application deposit of $20.00 must be submitted to the Superintendent, State Forest Ranger School, Lake City, Florida, at the time of formal application.

The Dissertation Deposit of $50.00 must be submitted to the Business Office upon notice from the Dean of the Graduate School.

The Special Fees are payable by the date set in the University Calendar or at the time the student expects to receive the service for which the fee is assessed.

Failure to pay registration fees when due makes the registration incomplete and will result in cancellation of registration or in the charging of the increased registration fee as described in the registration fee section.

REFUND OF FEES

A student cancelling his registration on or before the date scheduled for first class meetings of a semester or summer term will be entitled to a full refund of tuition, registration, and course fees (exclusive of College of Medicine Acceptance Deposit of $50.00 which is not refundable).

A student whose registration is cancelled by official University action at the beginning of a semester or term will be entitled to a full refund of tuition, registration, and course fees.

A student who withdraws or is suspended by University action after the first day of classes in any term or semester, but on or before the date indicated in the University Calendar covering the term or semester involved shall be refunded all tuition, registration, and course fees less a fixed charge of five dollars which is not refundable.

A student who withdraws or is suspended by University action after the catalog date set for refund of all but five dollars and on or before the day which marks the end of the third week of classes in any semester or the first week in any summer term shall be refunded 50% of tuition, registration, and course fees.

OTHER EXPENSES

Room Rent. Rent for rooms in the Residence Halls varies from $49.50 to $110.00 per student per semester. Remittances for room rent should be made in accordance with the directions issued by the Director of Housing. If the student does not reside in one of the units of the Residence Hall system the arrangements concerning rates

and method of payment are the responsibility of the individuals concerned.

Meals. The cost of meals throughout the University food service system varies with the taste of the individual. Attractive, well planned meals at reasonable prices are served on the cafeteria plan at several locations on the campus.

Books and Supplies. Cost of these items varies with the program of the student. It is estimated that from $40.00 to $100.00 per year will cover this expense for most students. In the first year at the College of Medicine, however, students expenses are approximately $500.00 - $700.00, depending upon the type of microscope and other instruments and equipment selected. Through the Bookstore branch in the Medical Sciences Building, the student may arrange to buy his microscope and other expensive training supplies on a four-year payment plan.

SUMMARY OF EXPENSES FOR THE SCHOOL YEAR

	Typical
Registration fees and course expenses	$150.00*
Books and Training Supplies	75.00
Laundry and Cleaning	55.00
Room and Board	600.00
Incidental Expenses	200.00

*College of Medicine students pay course fees of $225.00 or $350.00, depending on residence classification. All non-Florida students are charged $350.00 tuition per year in addition. Students enrolled in R.O.T.C. (required of Freshman and Sophomores) must deposit $20.00 at the time of registration. This is refundable at end of year if all equipment is returned in acceptable condition.

STUDENT BANK

Banking facilities are available to students on the campus through the Cashier's Section, Office of the Business Manager, Room 1, Administration Building. The purpose of this service is to provide a safe-depository for cash balances which the student may withdraw as needed. A fee of $1.00 per semester or $.75 per summer term is charged regardless of the number of deposits or withdrawals. Ordinarily students are restricted to a maximum balance of $750.00. Any part or all of a balance may be withdrawn at any time as long as funds are not being held against uncollected checks. A machine-posted pass book is issued to each depositor and must be used for all transactions. Accounts may be opened through the mail. Inquiries should be addressed to Cashier, University of Florida, Gainesville.

HOUSING

GENERAL INFORMATION

Each student must make personal arrangement for his housing either by (1) applying to the Office of the Director of Housing for assignment to the University Housing Facilities or, (2) in the case of an upperclass man who wishes to do so, obtaining an accommodation in private housing or in his fraternity house. (See Private Rooming Houses and Fraternities and Sororities).

All inquiries concerning housing applications, deposits, or rent payments in University Housing Facilities should be addressed to the Director of Housing, University of Florida, Gainesville. Checks or money orders for room deposits or rent payments should be made payable to the University of Florida and mailed to the Office of the Business Manager, Cashier, together with the application or rent invoice. Cash should NOT be sent through the mail.

An application for housing space may be filed at any time. Prospective students are urged to apply for housing as early as possible, since initial fall term assignments are made during the spring and early summer.

A deposit payment of ten dollars must accompany the application for housing. Each applicant is given advance notice of exact assignment and deadline date for rent payment, if possible. Each applicant should read carefully the terms and conditions covering housing assignments as stated on the back of the application form and on the notification of assignment.

Roommate requests are honored wherever possible, provided the individuals wishing to room together submit their applications and pay room deposits at the same date, clearly indicate on their respective applications their desire to room together, and are within similar academic classifications. A large number of selected foreign students are assigned as roommates with American students who are interested in foreign languages, trade, and international relations. It is the University's policy to encourage American and foreign students to room together, and any student interested in the program should indicate this on his application.

RESIDENCE REGULATIONS

All freshman men and all undergraduate women, with the exception of those whose residence is Gainesville or vicinity, are required to live in University Housing Facilities as long as space is available. Undergraduate women students, excepting freshmen, may live in sorority houses.

HOUSING ADMINISTRATION AND SERVICES

In each housing area there are carefully selected and trained full-time staff personnel known as Residents and Resident Advisers. These members of the Housing Staff are especially concerned with the educational potentials of group living. They are available to students with personal problems and questions regarding procedures, policies, and other aspects of campus life.

Carefully selected and specially trained upperclass students, known as student counselors and resident assistants, are assigned to the residence halls to lead in the organization of the residence group and to aid the other student residents in the solution of problems. Representatives are elected to student organizations in both men's and women's halls. These organizations sponsor programs and activities of general interest and benefit, and may establish regulations affecting life in the halls.

All facilities are equipped with basic furnishings of beds, mattresses, dressers, desks,

and chairs. Residents are encouraged to bring their own drapes, pictures, bedspreads, rugs, and lamps.

Students assigned to University Residence Halls should not purchase or bring any basic linens. A basic linen service is furnished at a cost of $8.00 per student per semester and includes 2 sheets, 1 pillow case, and 3 towels per week. The charge will appear on the room assignment and is due and payable with the rent. At a nominal cost, blankets, pillows, desk lamps, and additional linens may be obtained on a rental basis at any time.

Heavy luggage may be sent ahead, prepaid, addressed to the student's name and showing his assigned room number. Such shipments will be held until called for by the student. The University assumes no responsibility beyond the exercise of reasonable care for any shipment so received.

RESIDENCE HALLS FOR SINGLE STUDENTS

TOLBERT, NORTH, SOUTH, WEAVER, MALLORY, YULEE, REID, AND BROWARD HALLS

These eight halls are of modern design and of brick, concrete, and steel construction. Tolbert, North, South, and Weaver may be assigned to freshman or upperclass men. Mallory, Yulee, Reid, and Broward are available for freshman and upperclass women. Features include: office-to-room intercommunication system; post-office boxes for each room in building lobbies; large lounge for each building; study lounge on each upper floor; large recreation rooms; cafeteria (Broward); laundry and other self-service facilities. Double and single rooms only, with the number of single rooms limited. Community bath facilities on each floor. Hot water heating system thermostatically controlled for each building. Fluorescent lighting. Rates (subject to change): Small double room with double-decker bed, $60 per student per semester (in men's halls only); regular double room, $85 per student per semester; single room, $100 per student per semester.

BUCKMAN, THOMAS, SLEDD, FLETCHER, AND MURPHREE HALLS

These five halls of modern brick, concrete, and steel construction may be used by freshman or upperclass men. Each hall is divided into separate sections with accommodations for from 30 to 60 students per section. Double-decker beds and extra equipment increase room capacities in relation to anticipated demand for space. All but a few rooms have lavatories, and there is a community bath on each floor in each section. There are lounges and laundry facilities in the area. Steam heat. Room types: two-room suites for two or three students, double rooms for two or three students, single rooms for two students, and a limited number of single rooms. Regular Session rates (subject to change) range from $49.50 to $80 per student per semester .

GROVE HALL

This is a two-story hall of frame construction and may be used for freshman or upperclass men. Community bath facilities on each floor in each wing; separate laundry and ironing space provided in small wing of building; lounge and office on first floor. Mostly single rooms, with a number of small doubles. Rates (subject to change); Single room, $76.50 per student per semester; double room, $55 per student per semester.

FRAME HALLS

Buildings of one-story cemesto-board construction. Used for freshman and upperclass men. Community bath in each building, lavatory in each room. Hot air or hot water heating system. Rooms accommodate two students each. Rates (subject to

change) are $49.50 per student per semester. Acceptance of assignment to Frame Halls obligates the student for on-campus housing for the Academic Year. On request, these students will be transferred to permanent buildings as space becomes available. Freshman men are not required to accept assignment to Frame Halls, but may choose to locate housing in the city if all permanent facilities have been assigned.

FACILITIES FOR MARRIED COUPLES

Three Apartment Villages (Flavets), located on-campus, have been provided through the Public Housing Authority. Assignments are currently being offered only to married veteran students. Currently, there is a waiting period of more than one year between the date of application and the date an assignment can be made. Flavet I contains 22 buildings of one-story, temporary construction, divided into 87 appartment units of one, two or three bedrooms. Flavet II, similar to Flavet I in construction, contains 20 buildings divided into 76 apartment units, of one, two or three bedrooms. Flavet III contains 54 buildings of two-story, temporary construction, divided into 448 apartment units of one or two bedrooms. All apartments are equipped with basic furniture requirements, but residents must furnish their own linens, rugs, kitchenware, etc. Cooking and heating are by gas, metered to the individual apartments. Electricity consumption in excess of the basic minimum is paid on a monthly basis on meter readings. Rent rates per month (including basic electricity) are: one-bedroom apartment, $26.75; two-bedroom apartment, $29.50; three-bedroom apartment, $32.25.

Applications may be filed at any time and should be sent as soon as possible. Applications are being accepted from non-veterans for assignment at such time as all veteran applicants have been placed.

OFF-CAMPUS HOUSING

Private homes and privately operated rooming houses and apartments provide many accommodations for students.

Off-campus listings are maintained in the Housing Office but are not compiled for mailing since availability changes constantly and a mutually satisfactory rental arrangement can normally be made by the student *only* after personal inspection of facilities and conference with the householder. Students seeking off-campus housing should come to Gainesville well before the school period to confer with the Housing Office about accommodations. Advance appointments for conferences may be made.

Arrangements for the September semester should be completed between the middle of June and the middle of August, for the February semester, during January, and for the Summer Session between the middle of April and the end of May.

Any freshman man student or single undergraduate woman student who wishes to live off-campus must obtain advance clearance in writing from the Housing Office. Each single, undergraduate woman student under 21 years of age, who may be authorized to live off-campus, must file with the Office of the Dean of Women a form signed by her parents or guardians giving their approval of her living at a specific address. Such blanks are available from the Housing Office as well as the Office of the Dean of Women.

COOPERATIVE LIVING ORGANIZATION

The Cooperative Living Organization, incorporated in 1940, is operated by and for students with limited means for attending college. The Organization is located one block from the University campus, and has five residence buildings with a total

capacity of over seventy members. The affairs of the Organization are administered by a Board of Directors, elected annually from the membership.

Among the qualifications for membership are scholastic ability and reference of good character. Application for membership should be made to the Vice President at 117 N. W. 15th Street, Gainesville.

GEORGIA SEAGLE COOPERATIVE

Georgia Seagle Cooperative, organized in September, 1946, is unique in that its main tenet is Christian fellowship in all phases of college life. It is organized on a non-profit basis, with each member being assessed his pro rata share of actual operating cost, and is only successful through the active participation of all members in its program. Georgia Seagle Cooperative is non-sectarian and has most of the major religious denominations represented in its membership. The administrative powers of the organization are vested in its representative group, the Co-op Board.

Application for membership in this organization is made by personal interview early in May and early in December at the Georgia Seagle Hall, 1002 West University Avenue.

SPRINGFIELD HALL

Springfield Hall, organized in September, 1951, is the first women's living cooperative to be established on the campus. It is sponsored by the Wesley Foundation and is open to any woman student at the University who is interested in Christian cooperative living. It is organized on a non-profit basis, with each member being assessed her pro rata share of the actual operating cost.

Application for membership, may be made at the Wesley Foundation, 1320 West University Avenue.

FRATERNITIES AND SORORITIES

Most national fraternal groups with chapters at the University maintain their own houses adjacent to or on the campus. Freshman women are not permitted to live in sorority houses. Special regulations apply to freshman men living in their fraternity houses. University student regulations are in effect for all sorority and fraternity houses.

STUDENT LIFE—SERVICES, FACILITIES, ACTIVITIES, REGULATIONS

OFFICE OF THE DEAN OF STUDENT PERSONNEL

The Dean of Student Personnel coordinates the counseling and service activities which are available to aid the student in solving personal and educational problems and to help him in selecting a balanced program of social and recreational activities.

OFFICE OF THE DEAN OF MEN

The Dean of Men is the counselor to men students. He is interested in the total life of the student, including his academic, financial, social, and recreation activities. In cooperation with the Dean of Women and the Student Organizations Office, his office serves as a clearing house for all non-classroom activities. The Dean of Men serves as an adviser to student self-government so that these activities may provide training in citizenship and leadership. He cooperates with the Director of Housing in providing counseling for men who live in University living facilities.

OFFICE OF THE DEAN OF WOMEN

The Dean of Women has broad responsibilities for the welfare of women students. She serves as a counselor to students on a variety of problems and interests including personal, academic, financial and social.

In cooperation with the Dean of Men and the Student Organizations Office she serves as an adviser to student government and other student organizations.

The Dean of Women in cooperation with the Director of Housing, acts in an administrative, supervisory, and counseling capacity with relation to the University residence halls and women's fraternity houses.

OFFICE OF THE DIRECTOR OF HOUSING

The Director of Housing, in cooperation with the Deans of Men and Women, administers, supervises, and coordinates all programs and operations in the Residence Halls, the Flavet Villages, and an Off-Campus office. See section on "Housing" for details.

OFFICE OF THE ADVISER TO FOREIGN STUDENTS

The Adviser to Foreign Students is the co-ordinator of arrangements for all alien students at the University from the time of their first inquiries until they return to their home countries. His office cooperates with other University agencies in processing applications from foreign students for admission and financial aids. The office is primarily responsible for the reception and orientation of new students from abroad and cooperates with other officials and agencies of the University in providing necessary counseling for foreign students on academic, financial, language, social or other problems. The Adviser to Foreign Students is responsible for all of the University's relations with the U. S. Immigration Service and with other governmental and private agencies concerned with international student exchange. Assistance in an advisory capacity is provided for individuals and organizations interested in international understanding and intercultural exchange.

OFFICE OF STUDENT PERSONNEL RECORDS

Using various sources, the office of Student Personnel Records collects and integrates information concerning social and scholastic activities of each student. It makes

this information available to qualified counselors who aid the student in making educational, social, psychological, and vocational adjustment. The keeping of personnel records is an effort in the understanding of, and service to, the individual student as he has contact not only with the classroom, but also with all phases of his university life.

STUDENT ORGANIZATIONS OFFICE

The Student Organizations Office is interested in the activities of all organized student groups on the campus. It maintains complete records of these groups, including date of recognition, offices, constitution, etc. This office is also the authorization agency for social activities of all student organizations and provides information regarding regulations for such activities.

The Assistant Dean of Men is in charge of the Student Organizations Office and should be contacted regarding the formation and recognition of new student organizations and regarding any problems which may arise concerning the operation of student organizations.

UNIVERSITY PLACEMENT SERVICE

The University Placement Service is an agency designed to coordinate the placement activities of the departments, schools, and colleges on campus. This office cooperates directly with these University units in handling placement affairs and provides services which supplement their activities. Through its placement facilities, the University aids students in solving the problem of post-graduate employment and assists alumni in making suitable changes of employment.

The University Placement Service functions primarily as a clearing house, bringing together students, faculty members, and representatives of organizations that are seeking college trained personnel for permanent employment. Assistance is given students in preparing and making desired contacts for placement upon graduation by supplying job information, informing students of job opportunities, arranging interviews between employers and applicants, and helping the students gather and present their credentials to prospective employers.

Representatives from business, industry, and government are encouraged to visit the campus or write this office and take the opportunity to engage qualified University of Florida graduates.

FLORIDA CENTER OF CLINICAL SERVICES

The services of the five clinics which operate as a coordinated unit under the Division of Student Personnel are available to all University students without charge. Students are urged to seek assistance before their problems or difficulties become aggravated. The services of the clinics are available to the residents of the State of Florida for diagnostic purposes, therapy and counseling to the extent that off-campus subjects are needed in training programs and as personnel and facilities will permit.

PSYCHOLOGICAL CLINIC

One of the functions of this unit is to aid student on an individual basis to plan a vocational objective consistent with his capacities, interests, and temperament. Approved test and counseling methods are used, and results are supplemented by detailed occupational information. Other services of this unit include help to students who find their work hampered by worries, adjustment difficulties, and other troublesome conditions. In addition to the above functions, the Psychological Clinic works closely with the Department of Psychology in its program for the training of clinical psychologists and counseling psychologists.

SPEECH AND HEARING CLINIC

This clinic conducts a speech and hearing examination during orientation week of all freshmen and transfer students. The personnel of this unit are available to all University students who have speech and hearing problems which are handicapping in nature. In addition to losses in hearing such impairments include: stuttering, cleft palate speech, articulatory problems, voice abnormalties and other deviations from acceptability. This clinic operates as a laboratory for those students in the Speech Department who are training for speech and hearing therapists, speech pathologists, and audiologists.

READING LABORATORY AND CLINIC

Through the use of interviews and diagnostic tests, this clinic plans a program of study and training in reading skills for each individual who demonstrates a need for assistance. The program is planned according to the needs of the student, the time available in the student's schedule, and the amount of training necessary for permanent improvement of reading skills. In addition to remedial functions, this unit trains teachers and graduate students in the techniques of diagnosis and remediation. The clinic also carries on a program of research in many aspects of the field of reading and aids students and faculty members engaged in allied research. This clinic is an integral part of the C-3 program.

ADAPTED EXERCISES CLINIC

This program assists those students who have physical deviations which necessitate individual consideration in developing a sports program that is within the limits of their physical capacity. Due consideration is given to the individual's interests as well as the social and recreational needs for adult life. Programs of functional exercise are provided for those students having physical deviations that can be corrected or improved. The work is conducted under careful supervision and is based on adequate medical diagnosis and information.

MARRIAGE AND FAMILY CLINIC

The Marriage and Family Clinic deals with marital, premarital and family adjustment problems. Clients are assisted in gaining insight into problems and in weighing advantages and disadvantages of alternative adjustments. University students will find understanding and help in the solution of their marital and premarital problems.

STUDENT HEALTH SERVICE

Applicants for admission to the University are furnished a medical history and physical examination form by the Registrar's Office. The history is completed by the applicant before going to his physician for the physical examination. The physical examination must be performed and completed by a licensed Doctor of Medicine (M.D.) and mailed by the doctor directly to the Director, Student Health Department, University of Florida, Gainesville, Florida, using the business reply envelope supplied for that purpose. The medical history and physical examination must be reviewed by a University Physician before the applicant is cleared for registration in the University. The type of physical education for which the applicant is qualified, and the physical eligibility of male students for R.O.T.C. training, is determined on the basis of this pre-entrance examination, after conference and possible further examinations of those with reported physical defects. In cases where a defect is thought to exist, the student is requested to forward a letter from the family physician giving full details of diagnosis and treatment, in order that these may be incorporated in the record

for later reference if treatment should be required, and to further determine elegibility for physical education and R.O.T.C.

The Student Health Department strives to prevent students with communicable diseases from entering the University. All students enrolled at the University are given annual chest x-rays by the State Health Department and every effort is made to detect evidence of tuberculosis of which the student may be entirely unaware. (Faculty members and employees of the University are also given annual chect x-rays.) Late registrants will be charged a special fee of $2.00 for their chest x-ray if units of the State Health Department are not available. Students must have been successfully vaccinated against smallpox within the past 5 years. No exceptions are made to this ruling. Students who have not been vaccinated within 5 years are given this vaccination during registration week. The Infirmary, however, advises students to take care of this requirement before coming to the University, as the immunization limits participation in swimming and other required activities for a number of days after being applied. It is also advised that all students be immunized for typhoid fever and tetanus prior to arrival in Gainesville.

The University maintains the Student Health Department in the Infirmary building on the campus for the protection and medical care of the students in residence. The Outpatient Clinic is open during the day from 8:00 A.M. to 12:00 Midnight, to provide all students in need of medical care with consultation and treatment. Between the hours of 12:00 Midnight and 8 A.M., the building is locked, but students who are in need of medical care are seen by the Nursing Staff stationed on the hospital floors of the building. A call-bell at the entrance will summon a Nurse to the Clinic. A physician is on 24 hour call to care for emergencies too severe to be cared for by the Nursing Staff.

The Hospital, consisting of 65 beds, provides the students in need of hospitalization with twenty-four hour general nursing care. Patients entering the hospital are under constant observation by a University Physician. Between the hours of 9:30 P.M. and 7:30 A.M., an automobile is kept at the Infirmary to transport students from the Residence Halls to the Infirmary for medical care. Students are urged to report to the Infirmary at the first sign of an illness. In all cases where the illness is thought to be of more than average severity, parents will be notified by collect telephone by the Physician in charge of the case.

The Student Health Department gives as complete a diagnostic, treatment, and public health program as possible within the limitations of its personnel and equipment. It is staffed and organized for treating the acute illness which commonly occur while the student is in residence at the University. Facilities at the University Infirmary include the services of a competent medical staff, a psychiatrist, x-ray and clinical laboratories, pharmacy, and a physical therapy unit.

There are no facilities for dental work or eye refractions in the Student Health Department and, therefore, students are urged to have defects of vision and teeth corrected before coming to the University.

Some minor sugery is performed at the University Infirmary, but no major surgery. Major surgical operations are performed only with the consent of the student and/or parent or guardian, and at their expense. Whenever an emergency is imperative, the student shall be referred to a competent surgeon and transferred to the Alachua General Hospital in Gainesville, which is fully approved for surgery by the American College of Surgeons. Students receiving severe, multiple or compound fractures will be handled in the same manner as students in need of emergency surgery.

Competent physicians and surgeons in Gainesville cooperate readily with the Student Health Department in consultations. Whenever a student is found to be in need of a consultant, The University Physician will arrange for such a consultation. Local physicians are also available for medical service to students at their places of residence, at the student's expense.

Health service is available only to those students currently enrolled in the University who have paid the student health fee. In the case of married students, who are unacquainted with local physicians, the Student Health Department will be glad to recommend well qualified physicians to attend their families.

The Health Fee does not include surgery, consultation, or special duty nursing. These must be paid by the patient. Laboratory work done at the Infirmary is free of charge but any work that has to be referred elsewhere is the responsibility of the patient. Diagnostic x-ray service is offered at a very nominal cost. All x-rays are interpreted by a qualified Radiologist. A charge of $2.20 per day is made for students admitted to the Infirmary as inpatients.

The University is not responsible for the medical care of students during vacations, but, in certain instances, it may make special arrangements for the continued care of students who were hospitalized before the vacation period.

During epidemics, the facilities of the Student Health Department may be so overtaxed that the care of all ill students at the Infirmary will be impossible. In such an emergency every effort will be made to provide for the care of students outside the Infirmary, but the Student Health Department will not assume payment for services rendered by outside physicians or other hospitals.

STUDENT AID

STUDENT EMPLOYMENT

Every effort is made to aid qualified students in obtaining part-time employment. Opportunities are limited; consequently the number of part-time jobs available does not approach the number of applicants seeking these jobs. Every attempt is made to place students in work that utilizes their training and experience.

Student employment is directed by the Committee on Student Aid, Scholarships and Awards, under the supervision of the Dean of Men.

SCHOLARSHIPS

The University of Florida does not have large sums of money available for cash scholarships. Many of the scholarships available to students are awarded directly by the donors and administered through the University. These are a number of scholarships awarded and administered by the Committee on Student Aid, Scholarships and Awards. The Committee collects all information relative to the basis of the award, the value and other pertinent facts pertaining to scholarships. The Committee also collects information on the applicants and supplies this information to donors.

While scholarship as evidenced by academic achievement is an important factor in making awards, it is by no means the only consideration. The student's ability to profit by college training and his possible future contribution to society are important considerations in making all awards.

Prospective students are also urged to consult the resources of their home communities. Many civic clubs and community organizations are interested in providing means whereby students may attend college when they are convinced the investment will be worth while.

LOANS

All student loans are administered by the Committee on Student Aid, Scholarships and Awards unless otherwise provided for by the terms and conditions laid down by the donors of the loan fund.

The several loan funds available at the University of Florida may be divided into two classes: (1) the long-term loan fund which allows the student to complete his college education and repay the loan after graduation in installments over a period of years; and (2) the short term emergency loan which aims to meet the needs of unforeseen emergencies that arise in the financing of college expenses. As a rule, the short-term loans are for small amounts and are re-payable within the semester in which they are received.

PRIZES AND AWARDS

There are a number of prizes and awards made to students in recognition of exceptional achievement in various fields of study at the University of Florida. In some instances, these are cash grants; in others, medals, certificates or keys. These awards are administered through the Committee on Student Aid, Scholarships and Awards at the University.

A special student aid bulletin is published giving detailed information on all types of student aid, including employment, scholarships, student loans, prizes and awards. A copy of this may be had by writing to the Dean of Men's Office, University of Florida, Gainesville, Florida.

GRANTS-IN-AID TO CANDIDATES FOR MASTER'S AND DOCTORAL DEGREES

To assist able students in pursuing post-graduate studies leading to Masters' and Doctoral degrees, a number of grants are available. As a general aim emphasis will be placed upon building trained personnel in the State. In addition to receiving the authorized stipend, holders are relieved from the payment of out-of-state tuition fees. Unless otherwise stated, applications may be made to the Dean of the Graduate School.

AGRICULTURE:

H. Harold Hume Fellowship of the Florida Federation of Garden Clubs.—This fellowship, established by the Florida Federation of Garden Clubs, has for its object the investigation of special problems of ornamental horticulture in Florida. The work is under the direction of the Department of Ornamental Horticulture. The fellowship carries a stipend of $1,500 annually.

Robert W. Miller Memorial Scholarship Fund.—A fund has been established by the Miller Machinery and Supply Company for an annual $1,100 graduate fellowship to promote research in dairy products. Selection of the scholar is to be made by a committee composed of the head of the Dairy Science Department at the University of Florida and two other members to be chosen by the donors. A University of Florida graduate who is a resident of the State of Florida will be given preference.

Nematology Graduate Fellowship.—The Florida Agricultural Council has established two fellowships for work in nematology. One of these fellowships carries a stipend of $1,800 annually and is intended primarily for a student who is just entering the

graduate school. The other fellowship is for $3,000 annually and is to be granted to a student who has performed at least one year of successful graduate work. Applications should be made to the Dean of the College of Agriculture.

CHEMISTRY:

General Motors Research Fellowship.—One grant of $1,800 per year is awarded to a graduate student doing research in the field of analytical chemistry.

Graduate Naval Stores Assistantships.—Several grants of $1,466 each for an eleven-month period are made to qualified students in chemistry to carry on research involving naval stores products, or related compounds. Information may be procured directly from the Director of Naval Stores Research.

Parke-Davis Graduate Fellowships.—Two fellowships at a stipend of $1,500 each per year are available. These are in the field of synthetic organic chemistry.

Dow Chemical Fellowship.—One fellowship at a stipend of $2,700 per year is available. The research is in the field of synthetic organic chemistry.

MEDICINE:

Several predoctoral fellowships are available for graduate students in the basic medical sciences. Research positions are available part time on general research projects. Post-doctoral fellowships are available for exceptionally well-qualified recent graduates who wish additional research experience.

ENGINEERING:

Industrial Assistantships.—Various industrial assistantships are available from year to year. These vary in amounts from $1,600 to $2,140. Application should be made to the Director, Engineering and Industrial Experiment Station, College of Engineering.

INTER-AMERICAN AREA STUDIES:

See Dudley Beaumont Memorial Fellowships under Natural Sciences below.

NATURAL SCIENCES:

Dudley Beaumont Memorial Fellowships.—These fellowships, established by the trustees of the Louis D. Beaumont Trust in memory of Dudley Beaumont, are for graduate students in the field of natural sciences and in inter-American area studies. One or two with an annual stipend of $1,000 may be available. In selecting candidates, scholastic achievement and promise in research will be the principal criteria.

PHARMACY:

American Foundation for Pharmaceutical Education Fellowships.—A number of graduate scholarships are offered by the American Foundation for Pharmaceutical Education which carry stipends up to $1,500. Holders of these scholarships may pursue graduate work at the University of Florida. Applications should be made to the Foundation, 1507 M Street, N.W., Washington 5, D. C.

UNIVERSITY OF FLORIDA FELLOWSHIPS, SCHOLARSHIPS AND ASSISTANTSHIPS:

A number of graduate fellowships, research fellowships, and teaching assistantships are available annually to meritorious students at stipends ranging from $1,000 to $2,250 for the nine-month period. These are open to candidates in any field of graduate study

or research. Post-doctoral fellowships are available. Graduate assistantships are available in many departments of the University.

Non-Resident Tuition Scholarships are available to a limited number of graduate students. Awards are made on the basis of scholarship achievement.

One-third time Assistantships provide a stipend of $1,200 for nine months. An academic year of graduate residence may be completed in two semesters plus a summer school. Fifteen hours per week are devoted to duties in teaching or research. Assistants may be employed either for nine or eleven months.

One-half time Assistantships provide a stipend of $1,600 for nine months. An academic year of graduate residence may be completed in three semesters without summer school attendance. Assigned duties may amount to twenty hours per week.

FLORIDA UNION:

The Florida Union, the official center of student activities, is almost entirely financed by a student activity fee, and is governed by a Board of Managers, consisting of eight students and six faculty members.

The Union Board For Student Activities, composed of students interested in planning student activities, is empowered by the Board of Managers to plan and promote all social, cultural, and recreational activities in the Union. This Board and its several committees are open to any student interested in participating. The committees are Dance, Films and Forums, Fine Arts, Hostess, International Suppers, Public Relations, Recreations, Special Projects and Graduate.

Among the weekly activities sponsored by the Union Board and open to all students are cabaret dances, bridge lessons and tournaments, dancing classes, coffee hours, current football and special interest movies. Special activities such as receptions, dances, intra-campus and intercollegiate bridge, billiard and bowling tournaments, art exhibits, music appreciation listening hours, forums and book reviews, outings to scenic spots in the state and abroad, fashion shows, picnics and special holiday parties are all a part of the Union program.

The Union is open daily from 7:00 a.m. to 11:00 p.m. Among the facilities and services offered are music listening rooms, craft and hobby shop, photographic dark rooms, browsing library, game room, lounges, embosograf poster service, television, ticket booth, barber shop, free notary public service, public telephones, information desk, passenger and ride wanted bulletin boards, display cases, talent and band file, program consulting service, Western Union sub-station, auditorium and meetings rooms for all University organizations. Modern, air conditioned guest rooms are available for official guests of the University, guests of students, faculty, staff, and alumni.

Offices for the President of the Student Body, the Executive Council, Honor Court, Traffic Court, Florida Blue Key, International Student Organizations, and all student publications are located in the Union Building as is the office for the Director of Religious Activities.

The University's Camp Wauburg, operated by the Florida Union, is a recreation area for the exclusive use of students, faculty and staff of the University. This area, overlooking a beautiful lake, is located nine miles south of the campus. Facilities include a large picnic area, a recreation building, bath house, a dock with a diving board, many small outdoor fireplaces for cooking, and a playground area and equipment for volleyball, horseshoes, badminton, touch football, and softball. Other activities include swimming, boating, and fishing.

UNIVERSITY FOOD SERVICES

The University provides meals for all students on the cafeteria plan. Students are offered a high quality of food at reasonable prices, and the food is carefully planned and attractively served. The policy is to furnish well prepared food at the lowest possible cost. Coupon books containing tickets with a monetary value of $5.00 are available for the convenience of the students.

The Main Cafeteria is located in the central part of the campus and is accessible from all areas. Within the Cafeteria is the Campus Club, which, in addition to cafeteria service, offers grill and fountain items all hours of the day.

The Student Service Center is centrally located near all residence halls, providing complete fountain and short order grill service for planned meals or in-between-meal snacks. In addition, extensive banqueting and luncheon facilities are available for student organizations.

The P. K. Yonge Florida Room offering cafeteria and soda fountain service, is located near the women's residence halls. All meals are served daily and in addition fountain service is offered.

The Coed Shop in Broward Hall has a small cafeteria and fountain and grill facilities. Regular meals and in-between-meal snacks are offered.

Dormitory snack bars are operated for the benefit of students desiring in-between snacks at night within the various dormitories. These are operated every night except Friday and Saturday.

The Coffee Shop at the J. Hillis Miller Health Center provides soda fountain and grill service during weekdays.

STUDENT ACTIVITIES

ORGANIZATIONS AND PUBLICATIONS

Student Government.—Student government in the University of Florida is a cooperative organization based on mutual confidence between the student body and the faculty. Considerable authority has been granted the Student Body for the regulation and conduct of student affairs. The criterion in granting authority to the Student Body has been the disposition of the students to accept responsibility commensurate with the authority granted them. Generally speaking, the fields of student activity include regulation of extra-curricular affairs and the administration of the Honor System.

Every enrolled student, having paid his activity fee, is a member of the Student Body and has an equal vote in its government.

The University authorities feel that training in acceptance of responsibility for the conduct of student affairs at the University is a valuable part of the educational growth of the individual student. The Student Body is practically a body politic, occupying its franchise under grant from the Board of Control and subject to its continued approval.

Student government is patterned on the state and national form of government, but adapted to the local needs of the Student Body. Powers are distributed into the three branches: (1) legislative, which is embodied in the Executive Council; (2) judicial, which is embodied in the Honor Court with penal and civil jurisdiction of all judicial matters; (3) executive, embodied in the President and shared with the

Vice-President and the Secretary-Treasurer of the Student Body. Members of all three branches are elected directly by the Student Publications.

Women Students' Association.—The Women Students' Association of the University is a subsidiary of the student body. Its purposes are:

1. To promote the welfare of women students in cooperation with the administration, the student body, and the Dean of Women.
2. To deepen the sense of individual and collective responsibility.
3. To promote loyalty to all college activities and organizations and to uphold high social and academic standards among University women students.

Every undergraduate woman student upon registration in this University automatically becomes a member of the Women Students' Association of the University of Florida.

The business of the association is conducted by a council composed of an executive committee consisting of the officers, one representative from the freshman, sophomore, junior, and senior Classes respectively; the Secretary of Woman's Affairs, and representatives elected from Alpha Lambda Delta, the Hall Councils, Panhellenic, Women's Glee Club, Women's Independent Society, Women's Intramural Board and other women's organizations as they are admitted to the campus and passed on by the executive committee. There are also elected representatives from Off-campus students. Voting in these elections is limited to undergraduate women students.

Men's Council.—The Men's Council is a subsidiary organization of student government and was made a part of the organized set-up of the campus during the session of 1949-50. Under the leadership of the student body president in 1953-54, its program of activities was enlarged to include the various areas of men's student affairs on the campus.

The purpose of the Men's Council as set up in the constitution is "to concern itself with needs, interests, and welfare of men students at the University of Florida; to act in an advisory and consulting capacity to student government and other organized activities in which men students participate; to work with the Dean of Men's office and other administrative officials in maintaining of the school in the interest of building a greater University."

Representatives of the council are selected each year from the men's dormitories, fraternities, and those students living off-campus in rooming houses and in the Flavet villages.

Debating.—Practice in debating is open to all students through the programs of the varsity and University College debate squads. This work, which is sponsored by the Debate Club, is under the direction of the Department of Speech, and culminates in an extensive schedule of intercollegiate debates.

Dramatics.—Any student has an opportunity to participate in several plays which are presented each year by the *Florida Players,* a dramatic group under direction of the Department of Speech.

Executive Council.—The Executive Council is composed of representatives elected from the colleges on the campus and in general acts as administrator of Student Body affairs. The Athletic Council and the Lyceum Council have jurisdiction over their respective fields.

Publications.—The Student body publishes *The Seminole,* the year book; *The Florida Alligator,* the student newspaper; *The "F" Book,* the student's guide; and *The Orange Peel,* the campus literary magazine.

Religious Activities.—A broad program of inter-denominational religious activities is sponsored on the campus by the Student Religious Association. Composed of representatives of all denominational student religious groups and of the student body at large, the Association brings outstanding lecturers in the field of religion to the University, holds group discussions and seminars, and enlists students in a program of service to the University and the state. A faculty committee on religion, appointed by the President of the University, assists the Student Religious Association in its program and work.

Denominational centers adjacent to the campus and full-time student pastors are provided by the following religious groups: Baptist, Episcopal, Jewish, Methodist, Presbyterian, and Roman Catholic. Other denominations, most of which have churches in Gainesville, offer special student programs and services through the local groups.

SOCIAL FRATERNITIES

Twenty-five national social fraternities have established chapters at the University; most of them have already built chapter houses and others have leased homes. The general work of the fraternities is controlled by the Interfraternity Council, composed of one delegate from each of the national fraternities. The national fraternities at Florida are Alpha Epsilon Pi, Alpha Gamma Rho, Alpha Tau Omega, Beta Theta Pi, Chi Phi, Delta Chi, Delta Tau Delta, Delta Sigma Phi, Kappa Alpha, Kappa Sigma, Lambda Chi Alpha, Phi Delta Theta, Phi Gamma Delta, Phi Kappa Tau, Phi Sigma Kappa, Pi Kappa Alpha, Pi Kappa Phi, Pi Lambda Phi, Sigma Alpha Epsilon, Sigma Chi, Sigma Nu, Sigma Phi Epsilon, Tau Epsilon Phi, Tau Kappa Epsilon, and Theta Chi. Two colonies, 1834 Colony of Delta Upsilon and Mu Tau Colony of Sigma Alpha Mu, are also recognized as campus organizations.

Twelve national women's social fraternities have established chapters at the University. The twelve chapters are Alpha Chi Omega, Alpha Delta Pi, Alpha Epsilon Phi, Alpha Omicron Pi, Chi Omega, Delta Delta Delta, Delta Gamma, Delta Phi Epsilon, Kappa Delta, Phi Mu, Sigma Kappa, and Zeta Tau Alpha.

PROFESSIONAL AND HONORARY FRATERNITIES

Alpha Chi Sigma, chemistry; Alpha Delta Sigma, advertising; Alpha Epsilon Delta, premedical; Alpha Epsilon Rho, radio; Alpha Kappa Delta, sociology; Alpha Kappa Psi, business; Alpha Lambda Delta, women's freshman scholastic; Alpha Phi Omega, service; Alpha Tau Alpha, agricultural education; Alpha Zeta, agriculture; Beta Alpha Psi, accounting; Beta Gamma Sigma, commerce; Block and Bridle, animal husbandry; Delta Pi Epsilon, graduate business education; Delta Sigma Pi, business; Delta Theta Phi, law; Florida Blue Key, men's leadership; Gamma Sigma Delta, agriculture; Gamma Sigma Epsilon, chemistry; Gargoyle, architecture and allied arts; Kappa Delta Pi, education; Kappa Epsilon, pharmacy; Kappa Psi, professional pharmacy; Kappa Kappa Psi, band; Lambda Gamma Phi, preveterinary (local); Order of the Coif, law; Phi Alpha Delta, law; Phi Alpha Theta, history; Phi Beta Kappa, scholarship; Phi Delta Delta, law; Phi Delta Kappa, education; Phi Delta Phi, law; Phi Eta Sigma, men's freshman scholastic; Phi Kappa Phi, scholarship; Phi Sigma, biology; Pi Lambda Theta, education; Pi Mu, premedical; Pi Sigma Alpha, political science; Pica, journalism (local); Propellor Club of the U. S., business; Rho Chi, pharmacy; Scabbard and Blade, military; Sigma Alpha Eta, speech and hearing; Sigma Delta Chi, journalism; Sigma Delta Pi, Spanish; Sigma Delta Psi, athletics; Sigma Lambda Chi, building construction; Sigma Tau, engineering; Sigma Xi, scientific;

Tau Beta, band (women); Tau Kappa Alpha, debating; Trianon, women's leadership; Xi Sigma Pi, forestry.

CLUBS AND SOCIETIES

There are more than one hundred and fifty student clubs and organizations on the campus representing varied interests and activities. These include academic interest clubs, dance and social organizations, hobby groups, publications, religious groups and others.

HONOR SYSTEM

The Honor System.—One of the finest tributes to the character of the students at the University of Florida is the fact that the Student Body is a self-governing group. The details of the system by which this result is reached are explained to all freshmen during the first week of their enrollment in the University. However, each parent, as well as each prospective student, is urged to read the following discussion of the Honor System, as this phase of student government forms the keystone of the entire system.

In addition to permitting student legislation on questions of interest to the members of the Student Body, execution of the laws passed, and the expenditure of student funds, the governing system at the University gives to the students the privilege of disciplining themselves through the Honor System. Inaugurated by some of our greatest educators in higher institutions of the nation and early adopted in some departments of the University of Florida, the Honor System was finally established in the entire University in 1914 as the result of student initiative. This plan, having met with the approval of all officials of the University, was given the sanction of the Board of Control, and student representatives were selected by the students to administer the system.

Among the basic principles of an Honor System are the convictions that self-discipline is the greatest builder of character, that responsibility is a prerequisite of self-respect, and that these are essential to the highest type of education. Officials of the University and the Board of Control feel that students in the University of Florida should be assumed to be honest and worthy of trust, and they display this confidence by means of an Honor System.

The success of the system is dependent upon the honor of each individual member of the student body in that: (1) he is duty-bound to abide by the principles of the Honor Code, and (2) he is further pledged to report to the Honor Court such violations of the Code as he may observe.

Many men and women coming to the University for the first time feel hesitant about assuming this responsibility, inasmuch as early school training has created feelings of antipathy toward one who "tattle-tales" on a fellow-student. The theory of an Honor System adequately overcomes this natural reaction, however, when it is realized that this system is a student institution itself, and not a faculty measure for student discipline, and that to be worthy of the advantages of the Honor System each student must be strong enough to do his duty in this regard. In this way the responsibility for each student's conduct is placed where it must eventually rest—on himself.

The Honor Code of the Student Body is striking in its simplicity; yet it embodies the fundamentals of sound character. Each student is pledged to refrain from:

(a) cheating, (b) stealing, (c) obtaining money or credit for worthless checks.

On the basis of this Code, students are extended all privileges conceived to be the

basic right of students of Honor. There are no proctors in the examination rooms, each student feeling free to do his work, or to leave the room as occasion arises. Secondly, fruits and supplies are placed openly on the campus, with the confidence that each student will pay for any he may take. This system makes each student the keeper of his own consicience until he has proved to his fellow-students that he no longer deserves the trust placed in him.

A breach of the System may be flagrant and serious, or it may be extenuated by circumstances. It may need only mild corrective measures to help the violator obtain a finer conception of right and wrong; it may need strong measures. To enforce the System equitably the students have established the Honor Court. The Court is composed of thirteen justices, a chancellor and a clerk. The justices are elected each year from the various classes and colleges on the campus, the chancellor and the clerk being elected from the student body at large. Any student convicted by this Court has the right of appeal from its rulings to the Faculty Discipline Committee. A tribute to the efficiency of the Honor Court in its existence on the Florida Campus is realized in the fact that, since its establishment, a surprisingly insignificant number of the Court's decisions have been altered upon appeal.

The penal purpose of the Honor Court should receive less stress, perhaps, than its educational purpose, which is its most important function. The responsibility of acquainting every member of the Student Body with the purpose, advantages, and principles of the Honor System is placed upon members of the Court. In line with this work, members of the Honor Court participate in the orientation program each year during Orientation Week. In addition to a series of explanatory talks at that time, special programs are conducted by the Honor Court during the school year. Honor System talks are delivered in the high schools of the State upon request and at regularly scheduled times each spring, and radio programs are broadcast especially for the high schools from Station WRUF in Gainesville. In this way the Honor Court has endeavored to fulfill its responsibility to the students who undertake the problem of self-government and self-discipline at the University of Florida.

The parent of every prospective student should feel that it is his responsibility to stress the paramount importance of honorable conduct on the part of his son or daughter while in attendance at the University of Florida. Dishonest action brings sorrow both to parent and to student.

Because University students have proved worthy of the trust and responsibility involved in administering an Honor System, this feature of student government has become the greatest tradition at the University of Florida. It must be remembered that inasmuch as it is primarily a student responsibility, the future of the system rests with each new class of students entering the University.

The University faculty and administration pledge their support to the Honor System. Each student must support it or in failing to support it, contribute to the loss not only of a cherished tradition but the right of self-government. We at the University of Florida are fully cognizant that by fostering and supporting the ideals of self-government as reflected in student government, the support of American Democracy will be more thoroughly imbedded in the hearts of tomorrow's leaders.

INTERCOLLEGIATE ATHLETICS

The University of Florida Intercollegiate Athletic's Program is among the best in the South and compares favorably with the programs of leading institutions throughout the nation. As a member of the National Collegiate Athletic Association and the

Southeastern Athletic Conference, the University guides its intercollegiate program by the policies and regulations of those organizations. Major sports are football, basketball, baseball, swimming, and track. Minor sports are golf, tennis, cross country.

Physical facilities for intercollegiate athletics comprise the Florida Field Stadium seating approximately 40,000 spectators, a completely equipped varsity tennis stadium, two baseball diamonds, swimming pool, running track and stadium. In addition, large practice areas are available. The Florida Gymnasium of the College of Physical Education and Health provides spacious dressing and training quarters. Basketball facilities include four practice courts and the 7,000 capacity indoor stadium.

INTRAMURAL ATHLETICS AND RECREATION

Development of wholesome competitive spirit through enjoyable participation in physical activities is an essential aspect of a well-rounded college education. A successful intramural program depends primarily upon student interest in planning and executing the program as well as in actual participation in the various contests and recreational activities.

Widespread student participation in intramural sports and recreation is a tradition of long standing at the University of Florida. The extensive offering of activities provides every student an opportunity to take part as an individual or as a member of a group in sports of a competitive or recreational nature.

The student Intramural Boards conduct the details of an Intramural program comprising twenty sports ranging from such individual and dual activities as archery, tennis, and golf to such team sports as volleyball, basketball, and softball. There are four leagues of competition included in the program: (1) Sorority (2) Fraternity (3) Dormitory (4) Independent.

The department of Intramural Athletics and Recreation maintains a Recreational Sports Service which provides other leisure time activities for students and faculty. This Service also provides complete information and guidance for sports club activities. Where there is sufficient interest, additional sports clubs are formed and individuals with special ability in those areas are encouraged to act as leaders.

Equipment is furnished for all activities and is made available to any regularly enrolled student of the University of Florida upon request.

Every student at the University of Florida is urged to participate in Intramural activities as interest and time permits.

STUDENT REGULATIONS

For full information relative to graduation, failure in studies, conduct, social activities, etc, the student should consult the *Bulletin of Student Regulations* and the sections of the Catalog containing regulations of the separate Colleges and Schools. Each student is held responsible for observance of the rules and regulations of the University insofar as they affect him. Some regulations and interpretations supplementing the *Bulletin of Student Regulations* are given here.

CREDITS

The term credit as used in this bulletin in reference to courses is equal to one semester hour.

COLLEGE CREDIT FOR SERVICE TRAINING

Veterans may be allowed credit for training and experiences obtained in the armed forces during the war in accordance with the recommendations of the American Council on Education as set forth in "A Guide to the Evaluation of Educational Experiences in the Armed Services." All veterans entering or re-entering the University should consult the Director of Admissions in the Office of the Registrar. In many cases it will be helpful to the student and his dean in planning a program if this can be done in advance of registration.

DEGREES AND GRADUATION

The Board of Control will confer the degree appropriate to the course pursued under the following conditions:

1. *Curriculum requirements.*—Certification by the Registrar and the Dean of the college concerned that all requirements of the course of study as outlined in the college announcement, or its equivalent as determined by the faculty of the college offering the course, have been completed.

2. *Recommendation of the faculty of the college awarding the degree.*

3. *Residence requirements.*—(a) The minimum residence requirement for the baccalaureate degree (except the Bachelor of Laws degree) is two semesters, or one semester and three six-week summer terms, or one semester and two eight-week summer terms, or one semester and two nine-week summer terms, or five six-week summer terms, or four eight-week summer terms, or four nine-week summer terms. (b) For the Bachelor of Laws degree ninety weeks of study in an accredited law school, of which at least sixty-two must be in the College of Law at this University. (c) Students are required to complete the last thirty credit hours (fifty-five in the College of Law) applied towards the baccalaureate degree during regular residence in the college from which the student is to be graduated. Exception to this regulation may be made only upon written petition approved by the faculty of the college concerned, but in no case may the amount of extension work permitted exceed more than twelve of the thirty-six hours required for a baccalaureate degree. (d) For residence requirements for the various graduate degrees see the Graduate School section of the Catalog.

4. *Attendance at commencement.*—All candidates for degrees are required to be present at commencement exercises (Baccalaureate Sermon and Commencement Convocation). A student who fails to attend shall not have his degree conferred until he makes another application and complies with this requirement. This requirement is waived rarely. In general, illness of the candidate or similar emergency will be

considered the only satisfactory reason for waiver. Application for waiver must be made through the dean of the college concerned to the President.

5. *Average required.*—In order to secure a degree, a student must have a "C" average or better in all credits required in the Upper Division toward that degree.

6. *Two degrees.*—Two degrees of the same rank, e.g., A.B. and B.S. will not be conferred upon the same individual unless the second degree represents at least thirty semester hours of additional work, with the necessary qualitative and residence requirements.

7. *Continuous attendance.*—If a student's attendance is continuous, he will be permitted to be graduated according to the curriculum under which he entered, if the courses required are offered by the University. If some or all of the required courses are no longer offered, the faculty of the college concerned will make such adjustments for the indivdual student as is appropriate for the curriculum involved. As long as a student attends the University as much as one semester, or one summer term during any year, his residence is continuous.

8. *Application for degrees.*—Students who expect to be graduated must file application for the degree or diploma in the Registrar's Office on or before the time indicated in the current University Calendar. Students must make application in the term in which they expect to be graduated, regardless of previous applications made.

9. *Time limit.*—To receive a degree a candidate must have completed: (a) all residence work required for graduation at least 24 hours prior to the scheduled meeting of the College Faculty voting on the candidates for degrees; (b) all extension work at least two weeks prior to the scheduled meeting of the College Faculty voting on the candidates for degrees.

10. *Extension work permitted.*—(Note: Extension work as used below refers to both extension classes and correspondence study).

a. Students will not be permitted to take more than twelve semester hours of extension work during any academic year.

b. Students will not be permitted to take more than nine semester hours of extension work during the summer vacation period.

c. The amount of extension work for which students will be allowed credit toward a degree at the University shall not exceed one-fourth of the amount required for the degree. For additional regulations peculiar to the various colleges see the catalog or consult the dean of the college concerned.

d. Students will not be permitted to take by extension work more than twelve of the last thirty-six semester hours necessary for a baccalaureate degree.

e. Simultaneous registration in residence and extension work is permitted only upon approval of the dean of the college in which the student is registered and the Registrar.

11. *Registration of Graduate Students.*—Normally students in the Graduate School must be registered in the University at the time they receive a degree. In the event that a student has completed at the time of registration for the term in which the degree is to be awarded all requirements for a degree including courses, residence, thesis or dissertation, and all examinations for the degree, the Graduate Council will entertain a petition to waive this requirement. In other words, the student must be registered for the term in which the final examination is given.

MAXIMUM AND MINIMUM LOAD

Some colleges have a maximum load regulation which is stated in the Catalog. In the absence of such statement the general University regulation is followed. This regulation allows in a regular semester a maximum load of 17 hours for an average below "C" made during preceding term of attendance and 21 hours for an average "C" during the preceding term of attendance. The minimum load in a regular semester is 12 hours.

Correspondence or extension work, if the student is registered for such courses, is counted in computing the maximum load; but it cannot be counted to achieve the minimum load.

At the time of registration, a student, with the approval of his dean, may register for less than the minimum load. After the regular registration period has closed, no student will be permitted to continue with less than the mimum load unless he successfully petitions the Committee on Student Petitions.

The maximum load for a full summer term is nine hours; the minimum load is three hours.

GRADES

Results of students' work are recorded in the Registrar's Office as follows:

1. Undergraduate students: Passing grades are A, B, C, D, in order of excellence. Failing grades are E—Failure, I—Incomplete, X—Absent from examination.

Grades of I and X are considered as failing grades and they must be changed to passing grades in accordance with the dates set in the University Calendar, or be considered as grades of E in considering a student's record for graduation or in calculating averages. Ew—Dropped for non-attendance or unsatisfactory work. Students registered in the University College in courses for which the Board of University Examiners gives comprehensive examinations may receive the grade of H (which is neither passing nor failing), if the student files with the Board a request in writing to defer the examination. This request must be filed before the scheduled time for the examination concerned. An undergraduate student who re-registers for a course in which he has received a grade of I or X will automatically have the original grade changed to E.

2. Graduate students: Passing grades for graduate students in courses numbered below 600 are A and B. Passing grades for courses numbered 600 and above are A, B, C; however, C grades in courses numbered 600 and above count toward a graduate degree only if an equal number of credit hours in courses numbered 600 and above are earned with grade of A.

AVERAGES

How computed: Averages are determined by computing the ratio of honor points to semester hours recorded as attempted. The student receives honor points according to the following scale: A equals 4 honor points per semester hour; B equals 3 honor points per semester hour; C equals 2 honor points per semester hour; D equals 1 honor point per semester hour; E equals 0 honor point per semester hour; Ew equals 0 honor point per semester hour; H equals 0 honor point per semester hour; I equals 0 honor point per semester hour; X equals 0 honor point per semester hour. In computing averages, a course repeated is counted as many times as grades for it are recorded.

COMPREHENSIVE EXAMINATIONS

The comprehensive course examinations (of which the student must successfully pass six or more to complete the program of the University College) are administered by the Board of University Examiners and are given in January, May, and August of each year. A student must be familiar with the work of the various courses and be able to think in the several fields in a comprehensive way in order to pass these examinations. Standings on the comprehensive examinations are issued by the Board of Examiners and are not subject to change by any other agency.

APPLICATIONS FOR COMPREHENSIVE EXAMINATIONS

University College students who are enrolled in a course at the time the examination is given need not make application for it. University College students who are not enrolled in a course at the time an examination is given, and who wish to take the comprehensive examination, must apply in writing to the Board of Examiners for permission prior to the last date set for filing such applications. Applications will not be accepted from students registered in the colleges of the Upper Division. Before the application is accepted the applicant will be required to furnish the Board of Examiners with proof that this privilege has not been used to avoid the payment of usual University fees. Applications will be accepted only for those examinations which are administered by the Board of Examiners. The Board of Examiners is the only agency authorized to give University College students examinations by application.

As a general policy the Board of Examiners will not approve applications for comprehensive examinations if any of the following conditions prevail:

1. The student has been dropped from the course for excessive absences or unsatisfactory work.
2. The student has previously taken the examination in the course.
3. The student has completed other courses in the same general field (e.g., the student who has had courses in history, economics, etc., will not have an application for the comprehensive course in the social sciences (C-11 or C-12) approved).

PROBATION, SUSPENSION, AND EXCLUSION FOR ACADEMIC REASONS

The University of Florida accepts the responsibility of providing sound higher education. This includes the obligation to both the public and to the student of providing good higher education in an economical and efficient manner. In order to discharge this responsibility, the University must require reasonable academic progress from its students in return for the opportunity afforded them by a tax supported state university. To continue the registration of students who have demonstrated that they do not possess the necessary ability, or preparation, or industry, or maturity to obtain a reasonable benefit from a program of University study is inconsistent with this responsibility.

Consequently, the University of Florida Senate has enacted the following University regulations covering probation, suspension, and exclusion for academic reasons. Any college of the University may enforce additional academic standards and each student is responsible for observing the regulations of his college relating to such additional standards.

It is important to note that a student may be placed on various kinds of pro-

bation for reasons other than those listed below. For example, he may be admitted to the University on a probationary basis or he may be placed on disciplinary probation by reason of conduct or, in some cases, he may be placed on probation by the Committee on Student Petitions. In cases such as the foregoing the individual student will receive in writing a specific set of conditions which he must meet in order to remove the probation. In most cases these conditions will require loads, grades, etc., that are above the minimum set forth below. Inasmuch as such a student will have been placed on one of these specific probations only because of some previous academic difficulty or misconduct, in his particular case the specific terms of probation which are set forth for him become the necessary minimum achievement rather than the conditions set forth below.

ACADEMIC PROBATION

Lower Division Students:

1. A Lower Division student who fails to maintain a 1.0 honor point average for all work attempted in his first or second semester at the University of Florida will be placed on academic probation for his next semester.

2. A Lower Division student on academic probation (Under Article IV or XV) during his second semester will be ineligible for further registration in the University unless he maintains a 1.0 honor point average in all work attempted in that semester.

3. A Lower Division student who has attempted more than two semesters and who fails to maintain a 1.5 honor point average on all work attempted each semesetr thereafter will be placed on academic probation for his next semester.

4. A Lower Division student who has attempted more than two semesters and who is on academic probation (Under Article IV or XV) shall be inelegible for further registration in the University unless he maintains a 1.5 honor point average in all work attempted in that semester, or has a 1.5 cumulative honor point average in the total of all work attempted to date.

5. A Lower Division student who has attempted six semesters of work in the Lower Division shall be ineligible for further registration in the University unless he has been admitted to an Upper Division college.

A semester during which a student withdraws after the last date for dropping courses without a failing grade and any semester in which a student is suspended for non-attendance or unsatisfactory work shall be considered as a semester attempted in administering these regulations (Sections 1 through 5 above).

Upper Division Students:

6. Any Upper Division student who fails to maintain a 1.8 honor point average for all work attempted in any semester shall be placed on academic probation for his next semester.

7. An Upper Division student on academic probation (under Article IV or XV) will be ineligible for further registration in the University unless he maintains a 2.0 honor point average in all work attempted that semester or has 2.0 cumulative honor point average in the total of all work attempted while registered in his present Upper Division college.

SUSPENSION

All Undergraduate Students:

8. All Undergraduate students, (all those classified other than (6) who do not receive passing grades (A, B, C, or D) in more than one-half of the hours attempted in any term or semester shall be suspended immediately from the University for one full semester; however, failure in only one course carrying five semester hours credit or less shall not cause the student to be suspended under this provision. All Undergraduate students who are dropped from a course for excessive absences or unsatisfactory work and as a result of such drop are left with a load of less than 12 semester hours will be suspended for one full semester. A student eligible to return to the University after such a suspension shall be placed on academic probation for his next semester. The terms for satisfying his probation shall be those provided above appropriate to the number of semesters attempted. A second suspension for academic reasons shall be final and the student will not be eligible for further attendance at the University.

Graduate Students:

9. Under regulations prescribed by the Graduate Council any graduate student may be denied further registration in the University or in his graduate major when his progress toward completion of his planned graduate program becomes unsatisfactory.

ADMINISTRATIVE PROVISIONS

10. All actions taken under these regulations shall be reflected by appropriate notations on the student's record.

11. A student attending a summer session prior to his probational semester may satisfy the terms of his probation if he obtains the necessary probation honor point average as indicated above, computed by taking the grades of his last semester and summer session together.

ABSENCES OR UNSATISFACTORY WORK

Absences count from the first meeting of the class rather than from the date a student registers for a class.

A. If any student accumulates absences or fails to do class work to the extent that further enrollment in the class appears to be of little value to him or detrimental to the best interest of the class, it shall be the duty of the instructor to warn such student in writing that further absences or failure to do class work will cause him to be suspended from the course with a failing grade. Where possible this warning will be delivered personally; otherwise, it will be mailed to the student's last University address by the Registrar. Instructors shall immediately report all such warnings to the department head or course chairman. Should any absences or failure to do class work be incurred after this warning, the student will be suspended from the class and be given a failing grade by the Registrar upon receipt of notice from the instructor showing the date of warning.

   Should this reduce the load of the student below the minimum required, he will be suspended from the University. (See Art. XV).

B. When a student is suspended from a course under the provisions of A above, his parents shall be notified in writing by the Registrar.

C. NINE-DAY RULE: No student shall absent himself from the University for more than nine scholastic days per semester in order to participate in athletic or in extra-curricular activities.

The Nine-Day Rule applies to individual members of the group rather than to the group as a whole. Consequently, a schedule of more than nine days for any activity is not prohibited, provided the personnel of the group is so rotated that no student is absent from the campus for more than nine "scholastic" days (a scholastic day is any day on which regular class work is scheduled).

D. A student who has been warned for absences or unsatisfactory work in any class should not incur additional absences in that course, even though he has not been absent from the class for nine scholastic days. It is the responsibility of the student to see that his class work and attendance is satisfactory.

STUDENT OPERATION OF AUTOMOBILES

Freshmen and Sophomores and all students on probation are not permitted to have automobiles, with a few minor exceptions. The regulations on operation and registration of automobiles are published in a separate bulletin available to all students on request. All cars operated by students must be registered with the University Police.

Each student is held responsible for the registration, parking and traffic regulations as published in the special bulletin.

THE LOWER DIVISION

THE UNIVERSITY COLLEGE

INTRODUCTORY STATEMENT

In a reorganization of the University of Florida in 1935, all freshmen and sophomores were placed in one college. The University College administers all the work of the Lower Division, which includes the pre-professional work for the Upper Division Schools and Colleges and a core program of basic education for all students. In 1944 the American Council on Education defined this program: "General education refers to those phases of nonspecialized and nonvocational education that should be the common denominator, so to speak, of educated persons . . . the type of education which the majority of our people must have if they are to be good citizens, parents, and workers." During his freshman and sophomore years at the University, a student's time is about evenly divided between these objectives of general education and those of pre-professional or professional preparation.

While fully accepting its responsibility toward the professional training of her students who remain four years or longer and earn degrees, the University of Florida as a state institution also accepts its civic responsibility to help those who spend only one or two years at the University. These students—more than two-thirds of all enrolled—are not "failures" because they do not continue and earn degrees, and they probably deserve more from the state university than an odd assortment of only "introductory courses." Consequently at the University of Florida a group of comprehensive courses have been worked out to give some unity and meaning to a beginner's program. These comprehensive courses that make up the core program are:

1. *American Institutions* (known hereafter as C-1)
2. *The Physical Sciences* (C-2)
3. *Reading, Speaking, and Writing*: Freshman English (C-3)
4. *Practical Logic*: Straight Thinking (C-41)
   Fundamental Mathematics (C-42)
5. *The Humanities* (C-5)
6. *Biological Science* (C-6)

GUIDANCE

If a freshman is still undecided about his life's work, he is not urged to guess on registration day. His program may be made up largely from the comphensives which help him direct his thinking toward a desirable objective, together with approved electives that may further enable him to explore interests and needs. But whether the student is decided or undecided about his life's work, these comprehensive courses provide basic preparation that every educated person should have.

Thus since the purpose of general education is to replace fragmentation, the program absorbs much of the responsibility for guidance. Every subject or course of the University College program is designed to *guide* the student. During the time that he is making tentative steps toward a profession by taking special subjects to test aptitudes, interests, and ability, he is also studying the several great areas of human understanding and achievement. The work in the University College presents materials which are directly related to life experiences and which will immediately become a part of the student's thinking to guide him to making correct *next steps*. Thus the whole program — placement tests, progress reports, vocational aptitude tests, basic vocational materials,

selected material in the comprehensive courses, student conferences, adjustments for individual differences, election privileges, and comprehensive examinations—all are parts of a plan designed to *guide* students.

UPPER DIVISION COOPERATION

While the necessary correlation and unification is attempted at the University College Office, throughout the University College period students consult Upper Division deans and department heads to discuss future work. During the last month of each school semester these informal conferences are supplemented by a scheduled formal conference at which each student fills out a pre-registration card for his prospective Upper Division work.

UNIVERSITY COLLEGE COUNSELLORS

The University College Counsellors do not assume the responsibility that every student himself must take, but they help in every way possible as he assumes a greater and greater share of responsibility in his University education. The counsellors are located in the University College Office.

Every spring the University is privileged to give placement tests to all seniors in every high school of the state. Since many high schools are also trying to acquaint the student with the common body of knowledge so needed by all, their records along with the placement tests results indicate the variation that may be made in the general program.

A student who has had three or four years of preparatory school study in any one of the subject areas of the comprehensive courses, and his placement tests or progress tests indicate superior knowledge and understanding at this level may consult one of the counsellors for subsequent needed program adjustment.

THE ASSOCIATE OF ARTS CERTIFICATE

The Associate of Arts Certificate is awarded in recognition of the successful completion of two years of planned work. Specifically, one must pass at least sixty-four semester hours including pre-professional work and the comprehensive courses that make up the core program.

PROGRAMS OF STUDY

NORMAL PROGRAM

Freshman Year	Hours
1.—American Institutions	8
2.—The Physical Sciences	6
3.—Reading, Speaking and Writing: Freshman English	8
4.—Logic and Mathematics	6
5.—Departmental Electives	2-6
Military Science; Physical Fitness	2
	30-34

Sophomore Year	Hours
1.—The Humanities	8
2.—Biological Science	6
3.—Departmental Electives	16-20
Military Science; Physical Fitness	2
	30-34

At least sixty-four semester hours, which may include four hours of Military Science, are required to complete the Lower Division.

PRE-MEDICAL OR PRE-DENTAL STUDENTS

Freshman Year	Sophomore Year
1.—American Institutions	1.—The Humanities
2.—Chemistry	2.—Chemistry
3.—Reading, Speaking and Writing: Freshman English	3.—Physics
4.—Logic and Mathematics or Basic Mathematics	4.—General Animal Biology (Laboratory)
5.—Biological Science	5.—French or German
Military Science; Physical Fitness	Military Science; Physical Fitness

Dental schools the country over require for admission a minimum of two years (60 semester hours) of pre-dental collegiate work. For medical schools this minimum is usually three years (90 semester hours). The subjects which most catalogs list are:

Pre-dental	Pre-medical
6 semester hours of English	6 semester hours of English
6 semester hours of Biology	8 semester hours of Inorganic Chemistry
6 semester hours of Physics	8 semester hours of Organic Chemistry
8 semester hours of Inorganic Chemistry	8 semester hours of Physics
4 semester hours of Organic Chemistry	8 semester hours of Biology
30 semester hours of Electives	6 semester hours of French or German
	40-50 semester hours of Electives

These specific subjects may be taken as a part of a regular University College program. Catalogs of medical schools are kept at the University College Office and at the Pre-Professional Counselling Office, (201 Flint Hall).

Not all applicants who meet the minimum requirements are accepted. The ratio varies from 1 in 5 to 1 in 30. Excellent grades in the preparatory subjects are essential.

Pre-medical and pre-dental students should register with the Pre-Professional Counselling Office of the College of Arts and Sciences in Flint Hall, Room 201, no later than October of their *freshman year.* The functions of this office are described more fully under the heading "Advisement Panel" in the section of this catalog dealing with the College of Arts and Sciences.

A complete statement of the requirements of the University of Florida Medical College is to be found in another part of this catalog.

AGRICULTURE

The program for freshman and sophomores expecting to earn a degree in the College of Agriculture should be:

a) For students intending to major in Agricultural Chemistry—

Freshman Year	Hours	Sophomore Year	Hours
1.—C-1, American Institutions	8	1.—C-5, The Humanities	8
2.—C-3, Reading, Speaking and Writing: Freshman English	8	2.—C-6, Biological Science	6
3.—*MS. 105-106, Basic Mathematics	8	3.—C-41, Practical Logic	3
4.—**CY. 217-218, General Chemistry and Qualitative Analysis	8	4.—EH. 133, Effective Writing	3
5.—Military Science; Physical Fitness	2	5.—CY. 331, Introductory Quantitative Analysis	4
		6.—Approved Electives	6
		7.—Military Science; Physical Fitness	2
	34		32

*Students not qualified for MS. 105-106 will take C-42 and C-41 during the freshman year and MS. 105-106 in the sophomore year.

**Students not qualified for CY. 217-218 will take CY. 121 and CY. 122 the Freshman year; CY. 123 the Sophomore year.

b) For students intending to major in Agricultural Economics—

Freshman Year	Hours	Sophomore Year	Hours
1.—C-1, American Institutions	8	1.—CY. 109-110, Elements of Chemistry	6
2.—C-6, Biological Science or BTY. 101-102	6	2.—ATG. 211, Elementary Accounting	3
3.—C-3, Reading, Speaking and Writing: Freshman English	8	3.—C-5, The Humanities	8
4.—C-4, or MS. 105-106, Basic Mathematics*	8	4.—AS. 201, Principles of Agricultural Economics	3
5.—Military Science; Physical Fitness	2	5.—ES. 201, Basic Economics	3
		6.—Electives in Agriculture or Basic Sciences	5-11
		7.—Military Science; Physical Fitness	2
	32		30-36

*For students whose background in high school mathematics is weak, the following courses are suggested as substitutes for those indicated: C-42, MS 325 and MS 327. Students with an adequate high school mathematical background may substitute MS 325 and MS 327.

c) For students intending to major in Agricultural Education—

Freshman Year	Hours	Sophomore Year	Hours
1.—C-1, American Institutions	8	1.—C-41, Practical Logic	3
2.—C-3, Reading, Speaking and Writing: Freshman English	8	2.—C-42, Fundamental Mathematics	3
3.—C-6, Biological Science	6	3.—C-5, The Humanities	8
4.—AY. 221, General Field Crops	3	4.—BTY. 101-102, General Botany	6
5.—PY. 201, Fundamentals in Poultry Production	3	5.—CY. 109-110, Elements of Chemistry	6
6.—Military Science; Physical Fitness	2	6.—DY. 211, Principles of Dairying	3
	30	7.—VC. 212, Vegetable Gardening	3
		8.—Military Science; Physical Fitness	2
			34

d) For students intending to major in Agricultural Engineering, Agronomy*, Botany, General Agriculture*, Food Technology & Nutrition**, and Soils—

Freshman Year	Hours	Sophomore Year	Hours
1.—C-6, Biological Science and/or BTY. 101-102	6-12	1.—C-1, American Institutions	8
2.—C-3, Reading, Speaking and Writing: Freshman English	8	2.—C-4, Logic and Mathematics	6
3.—CY. 121-122, General Chemistry	8	3.—C-5, The Humanities	8
4.—Electives in Agriculture or Basic Sciences	0-6	4.—Electives in Agriculture or Basic Sciences	6-12
5.—Military Science; Physical Fitness	2	5.—Military Science; Physical Fitness	2
	30-36		30-36

*Students planning to major in Agronomy or General Agriculture are required to take BTY. 101-102 (prerequisites for Plant Pathology).
**Students qualified should take MS. 105-106.

e) For students majoring in Animal Husbandry and Nutrition—

Freshman Year	Hours	Sophomore Year	Hours
1.—BLY. 181, General Zoology	4	1.—C-1, American Institutions	8
2.—BTY. 101, General Botany	3	2.—C-4, Logic and Mathematics	6
3.—C-3, Reading, Speaking and Writing: Freshman English	8	3.—C-5, The Humanities	8
4.—CY. 121-122, General Chemistry	8	4.—DY. 211, Introduction to Dairy Science	3
5.—AL. 309, Agr. Eng. Course*	6	5.—AY. 324, Forage and Cover Crops	3
6.—Electives in Agriculture or Basic Sciences**	0-6	6.—Electives in Agriculture or Basic Sciences**	3-6
7.—Military Science; Physical Fitness	2	7.—Military Science; Physical Fitness	2
	31-37		33-36

*One of the following is suggested: AG. 301, AG. 302, AG. 306 or AG. 401.
**A conference is advised with the Head of Department of Animal Husbandry and Nutrition for recommendation on electives to take.

f) For students intending to major in Bacteriology (Microbiology) or Plant Pathology—

Freshman Year	Hours	Sophomore Year	Hours
1.—C-1, American Institutions	8	1.—C-5, The Humanities	8
2.—C-3, Reading, Speaking and Writing: Freshman English	8	2.—FH. or GN. 133-134, Language	6
3.—C-6, Biological Science and BLY. 161-162, Biology Laboratory or BTY. 101-102, General Botany*	6-10	3.—PS. 201-202, General Physics	8
4.—**MS. 105-106, Basic Mathematics	8	4.—CY. 121-122, General Chemistry or CY. 217-218, General Chemistry and Qualitative Analysis	8
5.—Military Science; Physical Fitness	2	5.—Electives	0-4
	32-36	6.—Military Science; Physical Fitness	2
			32-36

*For students majoring in Plant Pathology the requirement is BTY. 101-102, General Botany.
**Students not qualified for MS. 105-106 will take C-4 first.

g) For students majoring in Dairy Husbandry—

Freshman Year	Hours	Sophomore Year	Hours
1.—BTY. 101, General Botany	3	1.—C-1, American Institutions	8
2.—BLY. 181, General Zoology	4	2.—C-4, Logic and Mathematics	6
3.—C-3, Reading, Speaking and Writing: Freshman English	8	3.—C-5, The Humanities	8
4.—CY. 121-122, General Chemistry	8	4.—CY. 362-363, Organic Chemistry	5
5.—DY. 211, Introduction to Dairy Science	3	5.—AY. 324, Forage & Cover Crops	3
6.—Electives in Agriculture or Basic Science	4	6.—Military Science; Physical Fitness	2
7.—Military Science; Physical Fitness	2		32
	32		

Under certain circumstances students may take ACY 208 instead of CY 362-363.

h) For students majoring in Dairy Manufactures—

Freshman Year	Hours
1.—C-6, Biological Science	6
2.—C-3, Reading, Speaking and Writing: Freshman English	8
3.—CY. 121-122, General Chemistry	8
4.—DY. 211, Introduction to Dairy Science	3
5.—Electives in Agriculture or Basic Science	5
6.—Military Science; Physical Fitness	2
	32

Sophomore Year	Hours
1.—C-1, American Institutions	8
2.—C-4, Logic and Mathematics	6
3.—C-5, The Humanities	8
4.—Electives in Agriculture or Basic Science	8
5.—Military Science; Physical Fitness	2
	32

i) For students intending to major in Entomology there are two core curricula which are indicated as Curriculum A and Curriculum B. The student should refer also to the Upper Division requirements for these two curricula. A conference with the Head of the Department of Entomology is advised.

CURRICULUM A

Freshman Year	Hours
1.—C-1, American Institutions	8
2.—C-3, Reading, Speaking and Writing: Freshman English	8
3.—C-6, Biological Science	6
4.—*CY. 121-122, General Chemistry or CY. 109-110, Elements of Chemistry	6-8
5.—Military Science; Physical Fitness	2
6.—Electives	2
	32-34

Sophomore Year	Hours
1.—C-41, Practical Logic	3
2.—C-42, Fundamental Mathematics	3
3.—C-5, The Humanities	8
4.—EY. 203, Economic Entomology or EY. 307, General Entomology	3
5.—Military Science; Physical Fitness	2
6.—Electives	13
	32

CURRICULUM B

Freshman Year	Hours
1.—C-1, American Institutions	8
2.—C-3, Reading, Speaking and Writing: Freshman English	8
3.—C-6, Biological Science	6
4.—BLY. 161-162, Biology Laboratory	4
5.—BTY. 101-102, General Botany	6
6.—Military Science; Physical Fitness	2
	34

Sophomore Year	Hours
1.—C-41, Practical Logic	3
2.—C-42, Fundamental Mathematics	3
3.—C-5, The Humanities	8
4.—*CY. 121-122, General Chemistry or CY. 109-110, Elements of Chemistry	6-8
5.—EY. 307, General Entomology	3
6.—Military Science; Physical Fitness	2
7.—Electives	7
	32-34

*Students desiring a terminal course in chemistry should register for CY. 109-110. Those students requiring additional chemistry in order to complete their training should register for CY. 121-122.

j) For students intending to major in Fruit Crops—Citrus Production or Fruit Packinghouse Management and Marketing*—

Freshman Year	Hours
1.—Bty. 101-102, General Botany	6
2.—Cy. 121-122, General Chemistry	8
3.—C-1, American Institutions	8
4.—C-3, Reading, Speaking and Writing: Freshman English	8
5.—Military Science; Physical Fitness	2
	32

Sophomore Year	Hours
1.—Acy. 208, Agricultural Biochemistry	3
2.—Fc. 201, Principles of Horticulture	3
3.—Bty. 211, Elementary Plant Physiology	4
4.—Ey. 203, Economic Entomology	3
5.—C-4, Logic and Mathematics	6
6.—C-5, The Humanities	8
7.—Approved Electives	6
8.—Military Science; Physical Fitness	2
	35

*Students electing Fruit Packinghouse Management and Marketing will take Eh. 255 in their sophomore year.

k) For students intending to major in Fruit Crops Research—

Freshman Year	Hours
1.—Cy. 121-122, General Chemistry	8
2.—Ms. 105-106, Basic Mathematics	8
3.—Bty. 101-102, General Botany	6
4.—C-1, American Institutions	8
5.—Ey. 203, Economic Entomology	3
6.—Ag. 301, Drainage and Irrigation	3
	36

Sophomore Year	Hours
1.—Cy. 123, Qualitative Analysis	3
2.—Cy. 331, Introductory Quantitative Analysis	4
3.—Ps. 201-202, General Physics	6
4.—Ps. 207-208, Laboratory for Ps. 201-202	2
5.—C-5, The Humanities	8
6.—As. 201, Principles of Agricultural Economics	3
7.—Fc. 201, Principles of Horticulture	3
8.—C-3, Reading, Speaking and Writing: Freshman English	8
	37

l) For students intending to major in Ornamental Horticulture—

Freshman Year	Hours	Sophomore Year	Hours
1.—C-1, American Institutions	8	1.—C-5, The Humanities	8
2.—CY. 121-122, General Chemistry	8	2.—C-41, Logic	3
3.—C-3, Reading, Speaking, Writing: Freshman English	8	3.—Bty. 101-102, General Botany	6
4.—Ms 105* Basic Mathematics	4	4.—Cy 123, Qualitative Analysis	3
5.—Electives in Agriculture or Basic Sciences	4	5.—Ps 201-207, General Physics	4
6.—Military Science; Physical Fitness	2	6.—OH. 201, Introduction to Ornamental Horticulture	3
		7.—OH. 217, Plant Propagation	3
		8.—Approved Electives	2
		9.—Military Science; Physical Fitness	2
	34		34

*Students not qualified for Ms 105 will take C-42 during freshman year.

m) For students intending to major in Poultry Husbandry—

Freshman Year	Hours	Sophomore Year	Hours
1.—C-3, Reading, Speaking and Writing: Freshman English	8	1.—C-1, American Institutions	8
2.—CY. 121-122, General Chemistry	8	2.—*C-4, Logic and Mathematics	6
3.—BTY. 101, General Botany	3	3.—C-5, The Humanities	8
4.—BLY. 181, General Zoology	4	4.—ACY. 208, Agricultural Biochemistry	3
5.—Electives in Agriculture or Basic Sciences	9	5.—PY. 201, Fundamentals in Poultry Production	3
6.—Military Science; Physical Fitness	2	6.—Electives in Agriculture or Basic Sciences	4
		7.—Military Science; Physical Fitness	2
	34		34

*Students qualified should take MS. 105.

n) For students intending to major in Vegetable Crops—

Freshman Year	Hours	Sophomore Year	Hours
1.—C-1, American Institutions	8	1.—C-5, Humanities	8
2.—C-3, Reading, Speaking, Writing	8	2.—BTY-101-102, General Botany	6
3.—CY. 121-122, General Chemistry	8	3.—ACY-208, Agricultural Biochemistry	3
4.—C-4 or C-42 and MS-325, Mathematics	6	4.—VC. 201, Principles of Horticulture	3
5.—Elective in Agriculture or Basic Science*	0-3	5.—VC. 202, Vegetable Gardening	3
6.—Military Science; Physical Fitness	2	6.—Electives in Agriculture and Basic Science*	9
		7.—Military Science; Physical Fitness	2
	32-35		34

*Suggested Electives include: C-2, AL-309, AS-201, AY-221, CY-123, CY-211, OH-217, PS-110, PY-201.

Some variations from these programs are desirable in the different curricula of the College. The curriculum of the department in which the student intends to major should be consulted for these details. At least 64 academic hours which may include 4 hours of Military Science are required to complete the Lower Division; additional approved electives taken during the first two years may reduce the number of hours required for an Upper Division degree.

For desirable electives in Agriculture, students should consult the head of the department in which they intend to major. These electives during the first two years should be distributed so as to give some acquaintance with the different phases of Agriculture, and are limited to a single course in any one department. It is required that all students graduating in Agriculture take at least one course in each of the following departments: Agricultural Economics, Soils, either Agronomy, Food Technology and Nutrition, Fruit Crops, Ornamental Horticulture or Vegetable Crops, and either Animal Husbandry and Nutrition, Dairy Science or Poultry Husbandry. All such students, except those majoring in Agricultural Chemistry and Bacteriology, shall also take at least one course in Agricultural Engineering and in Entomology. Courses suitable for election in the freshman year are AG. 306, AL. 309, AY. 221, DY. 211, EY. 203, FY. 313, and PY. 201. In the sophomore year these may also be elected, and in addition the following: AG. 301, AS. 201, AS. 306, AY. 324, CL. 223, FC. or VC. 201, OH. 201, PT. 321, SLS. 301, and SLS. 302.

VETERINARY TRAINING UNDER REGIONAL PLAN

In accordance with the Regional Plan for Veterinary Education a limited number of bona fide residents of Florida are admitted each fall to the School of Veterinary Medicine, Alabama Polytechnic Institute.

The minimum educational entrance requirement is the satisfactory completion of two years of study in an approved accredited College or University. A total of 60 semester hours of college work must be completed with a grade point average of at least 2.25 which is the approximate equivalent of the numerical grade 80. Required subjects include Chemistry, Mathematics, Physics, English, History, certain Animal Husbandry courses and electives. In addition, applicants must meet military and physical fitness requirements in effect at the institution attended.

Pre-veterinary students should consult the Dean of the College of Agriculture before registering for the pre-veterinary curriculum.

Residents of Florida who will have completed the pre-veterinary requirements in June of the year entrance into the School of Veterinary Medicine is desired in the fall, and who wish to be included in the State's list of eligibles, should address inquiries to:

Secretary, Board of Control for Regional Education
Tallahassee, Florida

ARCHITECTURE AND FINE ARTS

The University College student who plans to earn a degree in the College of Architecture and Fine Arts elects one of the following basic programs:

A.—For the degree in Architecture or in Building Construction—

Freshman Year	Hours	Sophomore Year	Hours
1.—American Institutions	8	1.—The Humanities	8
2.—Reading, Speaking and Writing: Freshman English	8	2.—Biological Science	6
*3.—MS. 105-6	8	**3.—PS. 201-2	6
4.—AE. 101-2	6	4.—AE. 203-4	6
5.—Military Science or Elective	2	5.—AE. 205-6	6
6.—Physical Fitness	0	6.—Military Science or Elective	2
	32	7.—Physical Fitness	0
			34

B.—For the degree in Landscape Architecture—

Freshman Year	Hours	Sophomore Year	Hours
1.—American Institutions	8	1.—The Humanities	8
2.—The Physical Sciences	3	2.—Biological Science	6
3.—Reading, Speaking and Writing: Freshman English	8	3.—CL. 223	3
*4.—MS. 105-6 or MS. 105 and Logic	8 or 7	4.—CY. 109	3
5.—AE. 101-2	6	5.—AE. 203-4	6
6.—Military Science or Elective	2	6.—AE. 205	3
7.—Physical Fitness	0	7.—Military Science or Elective	2
	35 or 34	8.—Physical Fitness	0
			31

C.—For the degree in Interior Design—

Freshman Year	Hours	Sophomore Year	Hours
1.—American Institutions	8	1.—The Humanities	8
2.—The Physical Sciences	6	2.—Biological Science	6
3.—Reading, Speaking and Writing: Freshman English	8	3.—AE. 203-4	6
4.—Logic and Mathematics	6	4.—AE. 205	3
5.—AE. 101-2	6	5.—Approved Elective	3
6.—Military Science or Elective	2	6.—Military Science or Elective	2
7.—Physical Fitness	0	7.—Physical Fitness	0
	36		28

*Students not qualified for MS. 105-6 will take C-42 first.
**Students not qualified for PS. 201-2 will take C-22 first.

D.—For the degree in Painting and Drawing, Commercial Art, Crafts, or History of Art—

Freshman Year	Hours
1.—American Institutions	8
2.—The Physical Sciences	6
3.—Reading, Speaking and Writing: Freshman English	8
4.—Logic and Mathematics	6
5.—ART 121	3
6.—ART 123	3
7.—Military Science or Elective	2
8.—Physical Fitness	0
	36

Sophomore Year	Hours
1.—The Humanities	8
2.—Biological Science	6
3.—ART 124	3
4.—ART 222	3
5.—ART 225-6	6
6.—Military Science or Elective	2
7.—Physical Fitness	0
	28

E.—For the degree in Costume Design—

Freshman Year	Hours
1.—American Institutions	8
2.—The Physical Sciences	6
3.—Reading, Speaking and Writing: Freshman English	8
4.—Logic and Mathematics	6
5.—ART 121	3
6.—ART 123	3
7.—Military Science or Elective	2
8.—Physical Fitness	0
	36

Sophomore Year	Hours
1.—The Humanities	8
2.—Biological Science	6
3.—ART 124	3
4.—ART 222	3
5.—ART 290	3
6.—Approved Elective	3
7.—Military Science or Elective	2
8.—Physical Fitness	0
	28

F.—For the degree in Music Education—

Freshmen Year	Hours
1.—American Institutions	8
2.—The Physical Sciences	6
3.—Reading, Speaking and Writing: Freshman English	8
4.—Logic and Mathematics	6
5.—Applied Music in Courses below 100	2
6.—Ensemble	2
7.—Military Science or Elective	2
8.—Physical Fitness	0
	34

Sophomore Year	Hours
1.—The Humanities	8
2.—Biological Science	6
3.—EDF. 225	3
4.—EDF. 245	3
5.—MSC. 101-102	6
6.—Applied Music in Courses above 100	4
7.—Ensemble	2
8.—Military Science or Elective	2
9.—Physical Fitness	0
	34

ARTS AND SCIENCES

University College students who plan to enter the College of Arts and Sciences should:

1. Complete with satisfactory grades each of the "C" courses of the Lower Division or acceptable equivalent courses. (The University College counsellor can explain what are acceptable equivalent courses.) This should be the first concern of future Arts and Sciences students.

2. During their first semester or as soon as they have selected a major field, they should consult with the advisor for the proposed major department. (The name, office address, and counselling hours of these advisers are available in the Arts and Sciences College office, 103 Anderson Hall.)

3. Begin their foreign language requirement while registered in the University College.

4. Use the balance of their elective opportunities in the Lower Division in taking a selection of 100 and 200 level courses in several Arts and Sciences departments. Arts and Sciences courses numbered 300 or above are not available to Lower Division students except with written permission from the department offering such courses.

5. Study the material on admission, advisement panel, and requirements for degrees under the Arts and Sciences section of this catalog.

BUSINESS ADMINISTRATION

To enter the College of Business Administration, students are required to complete the curriculum below or the equivalent thereof in each of the courses or areas of knowledge listed including the following:

ES. 201-202.—Basic Economics
ATG. 211-212.—Elementary Accounting
ES. 203.—Elementary Statistics
MS. 208.—Business Mathematics

Freshman Year

First Semester	Hours	Second Semester	Hours
1.—American Institutions	4	1.—American Institutions	4
*2.—The Physical Sciences	3	*2.—The Physical Sciences	3
*3.—Logic or Mathematics	3	*3.—Logic or Mathematics	3
4.—Reading, Speaking and Writing: Freshman English	4	4.—Reading, Speaking and Writing: Freshman English	4
5.—Approved Electives	3	5.—Approved Electives	3
Military Science; Physical Fitness	1	Military Science; Physical Fitness	1
	15-18		15-18

Sophomore Year

1.—Accounting	3	1.—Accounting	3
2.—Economics	3	2.—Economics	3
3.—The Humanities	4	3.—The Humanities	4
4.—Biological Science	3	4.—Biological Science	3
5.—Statistics or MS 208	3-4	5.—MS 208 or Statistics	3-4
Military Science; Physical Fitness	1	Military Science; Physical Fitness	1
	17-18		17-18

*A student who has had three or more years of mathematics and science in preparatory school and whose standings on the placement tests indicate superior knowledge and understanding at these levels may substitute one of the introductory basic sciences for the general Physical Science course (C-2) and Basic Mathematics for Logic and Fundamental Mathematics.

At least sixty-four semester hours, which may include four hours of Military Science, are required to complete the Lower Division.

COURSES OFFERED BY THE COLLEGE OF BUSINESS ADMINISTRATION AVAILABLE TO STUDENTS IN THE UNIVERSITY COLLEGE

The following courses offered by the College of Business Administration may be taken by students in the University College: ATG. 211-212, Elementary Accounting; ATG. 214, Federal Income Taxes for Individuals; BS. 101, Introduction to Business; BS. 204, Business Ethics; BS. 231, Principles of Marketing; BS. 233, Salesmanship; BS. 260, Fundamentals of Insurance; BS. 271, Principles of Management; ES. 203, Elementary Statistics; ES. 201-202, Basic Economics; ES. 208, Economic History of the United States; ES. 210, Machine Technology in American Life; ES. 246, Consumer Economics; ES. 296, Industry and Trade of Latin America; RE. 291, Real Estate Fundamentals; and RE. 295, Housing and Home Ownership.

It is anticipated that some students who do not plan a four-year program will elect to take many of these courses or to arrange a program of two years or less in length in which many of these courses would be included. Also some students not headed for the College of Business Administration may wish to elect one or more of these courses.

EDUCATION

University College students working toward a degree in the College of Education should pursue one of the following programs:

BASIC PROGRAM

(Except Agricultural Education and Education for the Exceptional Child)

Freshman Year	Credits
1.—American Institutions	8
2.—The Physical Sciences	6
3.—Reading, Speaking and Writing: Freshman English	8
4.—Logic or Mathematics	3
5.—Military Science or Electives	2
6.—Electives (from list below)	6-8
7.—Physical Fitness	0
	33-35

Sophomore Year	Credits
1.—The Humanities	8
2.—Biological Science	6
3.—Logic or Mathematics	3
4.—Military Science or Electives	2
5.—Electives (approved)	12
6.—Physical Fitness	0
	31

Electives:

Elementary Education: EDF. 245-225; MSC. 161 (Prerequisite: MSC. 160 or pass music skills test); PHA. 361; SCA. 253.

*Secondary Education: EDF. 245-225.

*Business Education: BEN. 81, 91, 181; EDF. 245-225; ES. 201-2.

*Industrial Arts Education: EDF. 245-225; IN. 102.

For areas marked * three hours in the Human Adjustment area, other than C-41, are required. These electives may be taken either in the Univeristy College or in the College of Education.

BASIC PROGRAM FOR TEACHERS OF THE EXCEPTIONAL CHILD

Freshman Year	Credits
1.—American Instutions	8
2.—The Physical Sciences	6
3.—Reading, Speaking and Writing: Freshman English	8
4.—Practical Logic	3
5.—EDF. 245 — Aspects of Human Growth and Development	3
**6.—MSC. 161 — Music for the Elementary Child	3
7.—Military Science or Elective	2
8.—Physical Fitness	0
	33

Sophomore Year	Credits
1.—The Humanities	8
2.—Biological Science	6
3.—Fundamental Mathematics	3
4.—EDF. 225 — Children and Culture	3
5.—SCH. 201 — Effective Speaking	3
6.—PSY. 201 — General Psychology	3
7.—PHA. 361 — The Elementary School Health Program	3
8.—Military Science or Elective	2
9.—Physical Fitness	0
	31

**Prerequisite: MSC. 160 or pass music skills test.

BASIC PROGRAM FOR AGRICULTURAL EDUCATION

Freshman Year	Credits
1.—American Institutions	8
2.—Reading, Speaking and Writing: Freshman English	8
3.—Biological Science	6
4.—AY. 221, General Field Crops	3
5.—PY. 201, Fundamentals in Poultry Production	3
6.—Military Science; Physical Fitness	2
	30

Sophomore Year	Credits
1.—Practical Logic	3
2.—Fundamental Mathematics	3
3.—The Humanities	8
4.—BTY. 101-102, General Botany	6
5.—CY. 109-110, Elements of Chemistry	6
6.—DY. 211, Principles of Dairying	3
7.—VC. 202, Vegetable Gardening	3
8.—Military Science; Physical Fitness	2
	34

ENGINEERING

The program for first and second year students expecting to earn a degree in the College of Engineering is as follows:

First Semester	Credits
1.—C-11, American Institutions	4
*2.—C-21, The Physical Sciences	3
3.—C-31, Reading, Speaking and Writing: Freshman English	4
*4.—C-42, Fundamental Mathematics	3
5.—MY. 101, Military Science	1
6.—PL. 101, Physical Fitness	0
	15

Second Semester	Credits
1.—C-12, American Institutions	4
*2.—C-22, The Physical Sciences	3
3.—C-32, Reading, Speaking and Writing: Freshman English	4
*4.—C-41, Practical Logic	3
5.—MS. 105, Basic Mathematics	4
6.—MY. 102, Military Science	1
7.—PL. 102, Physical Fitness	0
	19

Third Semester	Credits
1.—MS. 106, Basic Mathematics	4
2.—CY. 217, General Chemistry and Qualitative Analysis	4
3.—C-51, The Humanities	4
**4.—ML. 181, Engineering Drawing	3
5.—MY. 201, Military Science	1
6.—PL. 103, Physical Fitness	0
	16

Fourth Semester	Credits
1.—MS. 353, Differential Calculus	4
2.—CY. 218, General Chemistry and Qualitative Analysis	4
3.—C-52, The Humanitles	4
**4.—ML. 182, Descriptive Geometry	3
5.—MY. 202, Military Science	1
6.—PL. 104, Physical Fitness	0
	16

*In cases where students, on the basis of superior placement test grades, are allowed to omit starred courses, they will need to take an equivalent amount of more advanced work in order to be eligible for admission to the College of Engineering at the end of the second year.

**Drawing equipment required for ML. 181, ML. 182, and subsequent courses cost approximately thirty dollars.

Students whose records in the University College do not indicate that they are qualified to take the professional courses in Engineering will not be admitted to the College of Engineering.

FORESTRY

The program for freshmen and sophomores planning to earn a degree in the School of Forestry should be:

FOREST MANAGEMENT AND FOREST PRODUCTS TECHNOLOGY

Freshman Year	Hours
1.—C-1, American Institutions	8
2.—BTY. 101-102, Botany	6
3.—C-3, Reading, Speaking and Writing	8
*4.—MS. 105-106, Basic Mathematics	8
or MS. 325-327.—Advanced General Math.	6
5.—Approved Electives	0-6
6.—Military Science	2
Physical Fitness	0
	32-38

Sophomore Year	Hours
1.—CY. 121-122, General Chemistry	8
2.—C-5. The Humanities	8
3.—CL. 223, Surveying	3
4.—FY. 220, FY. 226-227, FY. 318,	9
**5.—ML. 181, Engineering Drawing	3
6.—Approved Electives	0-6
7.—Military Science	2
Physical Fitness	0
	33-39

WILDLIFE MANAGEMENT

Freshman Year	Hours
1.—C-1, American Institutions	8
2.—C-3, Reading, Speaking and Writing	8
*3.—MS. 105-106, Basic Mathematics	8
or MS. 325-327, Advanced General Math	6
4.—C-6, Biological Science	6
5.—BLY. 161-162, Biology Lab.	4
6.—Military Science	2
Physical Fitness	0
	36

Sophomore Year	Hours
1.—C-5, The Humanities	8
2.—CY. 121-122, General Chemistry	8
3.—FY. 220, FY. 226-227,	6
4.—CL. 223, Surveying	3
5.—FY. 318, Forest Utilization	3
6.—Military Science	2
Physical Fitness	0
	30

APPROVED ELECTIVES

(other courses may be approved by the faculty)

FOREST MANAGEMENT

1.—C-21, The Physical Sciences
2.—ES. 201-202, Basic Economics
3.—PS. 110, Agricultural Physics
4.—ATG. 211-212, Elementary Accounting
5.—GY. 203, Elements of Physical Geology

WILDLIFE MANAGEMENT

1.—C-21, The Physical Sciences
2.—ES. 201-202, Basic Economics
3.—AY. 221, General Field Crops
4.—AY. 324, Forage and Cover Crops
5.—GY. 203, Elements of Physical Geology

FOREST PRODUCTS TECHNOLOGY

1.—CY. 217-218, General Chemistry and Qualitative Analysis may be substituted for CY. 121-122
***2.—MS. 353, Differential Calculus may be substituted for CL. 223
3.—ATG. 211, Elementary Accounting
4.—AG. 302, Farm Motors
5.—AG. 303, Farm Shop
6.—IN. 303, Machine Woodwork
7.—AS. 311, Rural Law

*The above is designed for students whose placement tests and preparatory school work entitle them to this election. Others will take the general subject C-42 first.

**Forest Products Technology students substitute FY. 309, Wood Technology I; ML. 181 is scheduled for the junior year.

***CL. 223 is required for students electing summer camp.

SCHOOL OF JOURNALISM AND COMMUNICATIONS

Curricula leading to the Bachelor of Science in Advertising, Journalism, or Communications:

Freshman Year	Credits
1.—American Institutions	8
2.—The Physical Sciences	6
3.—Reading, Speaking and Writing: Freshman English	8
4.—Logic and Mathematics	6
5.—COM. 118	3
6.—Military Science	2
7.—Physical Fitness	0
	33

Sophomore Year	Credits
1.—The Humanities	8
2.—Biological Science	6
3.—COM. 201	3
4.—COM. 212 (For Communications Majors)	3
5.—SCH. 201	3
6.—ES. 201	3
7.—Approved Elective	3
8.—Military Science	2
9.—Physical Fitness	0
	31

LAW

Applicants for admission to the College of Law must have received before admission a four-year baccalaureate degree from a college or university of approved standing except as stated in the description of the College of Law in this Catalog.

Although no particular courses are prerequisites, a student preparing for admission to the College of Law should obtain a thorough mastery of the basic comprehensive courses and should take also at least two courses in each of the following general fields: Accounting, Economics, English, History (American and English), and Political Science. Since concepts expressed in words are tools of the legal profession, it is essential that a student be able to read rapidly and meaningfully and to write clearly and concisely. Courses requiring the rapid assimilation and digestion of written materials and courses in expository writing therefore are recommended.

PHARMACY

In keeping with the requirements of the American Council on Pharmaceutical Education, all students expecting to earn the degree of B.S. in Pharmacy must be enrolled in one or more Pharmacy courses for a minimum of three academic years or a total of twenty-seven months. This regulation applies regardless of the number of studies completed in other fields. Upon enrolling in Pharmacy courses for the first time students must sign the register in the office of the Dean of the College of Pharmacy. Students are advised to pursue the following program:

Freshman Year and Summer Session	Hours
C-11-12, American Institutions	8
C-31-32, Freshman English	8
C-41, Practical Logic	3
C-42, Fundamental Mathematics	3
C-51, The Humanities	4
C-61-62, Biological Science	6
CY. 121-2, General Chemistry	8
PHY. 106, Pharmaceutical Calculations	2
Military Science; Physical Fitness	2
	44

Sophomore Year	Hours
C-52, The Humanities	4
PS. 201-2, General Physics	6
PS. 207-8, Physics Laboratory	2
PGY. 221-2, Practical Pharmacognosy	6
PHY. 223-4, Galenical Pharmacy	6
CY. 123, Qualitative Analysis	3
CY. 331, Quantitative Analysis	4
Military Science; Physical Fitness	2
	33

Only students having an average of C or higher will be admitted to the College of Pharmacy and/or pharmacy courses in the Upper Division. In addition, all pre-pharmacy students must have grades of C or higher in each of the following courses: C-42, CY. 121, CY. 122, PGY. 221, PGY. 222, PHY. 106, PHY. 223, and PHY. 224.

PHYSICAL EDUCATION AND HEALTH

University College students expecting to earn a degree in the College of Physical Education and Health should pursue one of the following programs:

A.—For men intending to major in Physical Education—

Freshman Year	Credits	Sophomore Year	Credits
C-11-12—American Institutions	8	C-21-22—The Physical Sciences	6
C-31-32—Reading, Speaking and Writing	8	C-51-52—The Humanities	8
C-41-42—Logic and Mathematics	6	C-61-62—Biological Science	6
PHA. 284—Team Games for Men	2	PHA. 251—Folk, Social and Tap Dance	2
PHA. 287—Gymnastics for Men	2	PHA. 283—Track and Baseball	2
PHA. 291—Principles of Physical Education	3	EDF. 245—Aspects of Human Growth and Development	3
Military Science; Physical Fitness	2	Approved Electives	4
	31	Military Science; Physical Fitness	2
			33

B.—For women intending to major in Physical Education—

Freshman Year	Credits	Sophomore Year	Credits
C-11-12—American Institutions	8	C-21-22—The Physical Sciences	6
C-31-32—Reading, Speaking and Writing	8	C-51-52—The Humanities	8
C-41-42—Logic and Mathematics	6	C-61-62—Biological Science	6
PHA. 251—Folk, Social and Tap Dance	2	PHA. 252—Modern Dance	1
PHA. 253—Team Sports for Women	2	PHA. 254—Team Sports for Women	2
PHA. 255—Individual and Dual Sports for Women	2	PHA. 256—Swimming and Diving for Women	1
PHA. 257—Gymnastics for Women	1	PHA. 258—Tennis and Golf for Women	2
PHA. 291—Principles of Physical Education	3	EDF. 245—Aspects of Human Growth and Development	3
Physical Fitness	0	Aoproved Electives	3
	32	Physical Fitness	0
			32

C.—For men and women intending to major in Health Education—

Freshman Year	Credits	Sophomore Year	Credits
C-11-12—American Institutions	8	C-51-52—The Humanities	8
C-31-32—Reading, Speaking and Writing	8	C-61-62—Biological Science	6
C-41-42—Logic and Mathematics	6	*CY. 121-122—General Chemistry	8
EDF. 245—Aspects of Human Growth and Development	3	SY. 201—Sociological Foundation of Modern Life	3
PHA. 261—Personal Hygiene	3	EDF. 225—Children and Culture	3
Approved Electives	2	SY. 244—Marriage and the Family	3
Military Science or Electives	2	Military Science or Electives	1
Physical Fitness	0	Physical Fitness	0
	32		32

*Students planning to major in Health Education must take CY. 121-122. Students whose high school records and placement tests indicate satisfactory preparation may substitute CY. 121-122 for C-21-22. Others should take C-21, upon satisfactory completion of which they may enter CY. 121.

D.—For men and women intending to major in Recreation—

Freshman Year	Credits	Sophomore Year	Credits
C-11-12—American Institutions	8	C-21-22—The Physical Sciences	6
C-31-32—Reading, Speaking and Writing	8	C-51-52—The Humanities	8
C-41-42—Logic and Mathematics	6	C-61-62—Biological Science	6
PHA. 284—Team Games for Men or PHA. 253—Team Sports for Women	2	PHA. 251—Folk, Social and Tap Dance	2
PHA. 255—Individual and Dual Sports for Women	2-0	SY. 201—Sociological Foundation of Modern Life	3
EDF. 245—Aspects of Human Growth and Development	3	IN. 330—Elementary School Handcrafts	3
Military Science or Electives	3-5	PHA. 283—Track and Baseball or PHA. 258—Tennis and Golf for Women	2
Physical Fitness	0	Military Science or Electives	2
	32	Physical Fitness	0
			32

E.—For men and women intending to major in Physical Therapy—

Freshman Year	Credits
C-11-12—American Institutions	8
C-31-32—Reading, Speaking and Writing	8
C-41-42—Logic and Mathematics	6
C-61-62—Biological Science	6
BLY. 161-162—Biology Laboratory	4
Military Science or Electives	2
Physical Fitness	0
	34

Sophomore Year	Credits
*CY. 121-122—General Chemistry	8
C-51-52—The Humanities	8
PHA. 295—Introduction to Physical Therapy	2
PSY. 201—General Psychology	3
PSY. 205—Social Psychology or PSY. 202—Personality Development or PSY. 211—Psychological Measurement	3
Approved Electives	6
Military Science or Electives	2
Physical Fitness	0
	32

*Students planning to major in Physical Therapy must take CY. 121-122. Students whose high school records and placement tests indicate satisfactory preparation may substitute CY. 121-122 for C-21-22. Others should take C-21, upon satisfactory completion of which they may enter CY. 121.

THE UPPER DIVISION

COLLEGE OF AGRICULTURE

ORGANIZATION

The College of Agriculture is composed of three units, namely, 1. Instruction, 2. Research (Agricultural Experiment Station), and 3. Extension (Agricultural Extension Service). The Instructional Division (The College proper) is made up of departments in the College devoted to the various phases of technical and practical agricultural work. The work of these departments is closely related, and the aim of the College is to afford students the best possible training for service in agriculture.

The departments in the College are: Agricultural Chemistry (administered jointly with the College of Arts and Sciences), Agricultural Economics, Agricultural Education (administered jointly with the College of Education), Agricultural Engineering, Agronomy, Animal Husbandry and Nutrition, Bacteriology, Botany, Dairy Science, Entomology, Food Technology and Nutrition, Fruit Crops, Ornamental Horticulture, Plant Pathology, Poultry Husbandry, Soils, Vegetable Crops, and Veterinary Science.

REQUIREMENTS FOR ADMISSION

To enter the College of Agriculture students are required to present a certificate of graduation from the University College, or its equivalent in credits from other institutions. Students should have completed the course indicated in the program for freshman and sophomore years in the University College. Curricula of the various departments of the College of Agriculture should be referred to for some special requirements.

DEGREES AND CURRICULA

The degree of Bachelor of Science in Agriculture is awarded to students who complete 68 hours of work in the Upper Division, fulfilling the requirements of one of the several curricula in Agriculture. The following curricula in agriculture are offered:

Agricultural Chemistry
Agricultural Economics
Agricultural Education
Agricultural Engineering
Agronomy
    Agronomy
    General Agriculture
Animal Husbandry and Nutrition
Bacteriology
Botany
Dairy Science
    Dairy Husbandry
    Dairy Manufactures
Entomology
Food Technology and Nutrition
Fruit Crops
    Citrus Production
    Fruit Crops Research
    Fruit Packinghouse Management and Marketing
Ornamental Horticulture
Plant Pathology
Poultry Husbandry
Soils
    Soil Fertility and Management
    Soil Chemistry and Microbiology
    Soil Surveying
Vegetable Crops

These curricula offer the student opportunity for study along many lines of agriculture. They are so arranged as to permit the student to go into that branch for which he has special ability, and will prepare him to meet the problems which arise in that field. The great practical value of these curricula is shown by those who have completed them and have gone back to the farm, grove or ranch, and also by those who, upon graduation, have gone into the agricultural industries and professions.

In addition to laboratory work at the College, field trips and travel courses are arranged so that students have an opportunity to visit various commercial enterprises throughout the state. Visits to farms, groves, ranches, packing houses, processing plants, stock shows, markets, phosphate plants, fertilizer factories and other agri-

cultural industries have proved to be particularly valuable when made by students in company with professors from the College.

A minimum of 20 semester hours is required for a major in any department. The head of the department in which the student majors (or his appointee) will act as the student's adviser, assist the student in arranging his course of study, and make necessary recommendations to the Dean. The student's courses for each semester are subject to the approval of the Dean and the department head.

If a student anticipates pursuing graduate work, he will find it helpful to elect as many basic courses as possible, such as chemistry, biology, mathematics, botany, physics, economics, and a language. If he does not expect to take up graduate study, he will find it profitable to elect as much technical agriculture as possible in departments related to his major work.

It is required that all students graduating in Agriculture take at least one course in each of the following departments: Agricultural Economics, Soils, either Agronomy, Food Technology and Nutrition, Fruit Crops, Ornamental Horticulture or Vegetable Crops, and either Animal Husbandry and Nutrition, Dairy Science or Poultry Husbandry. All such students, except those majoring in Agricultural Chemistry or Bacteriology, shall also take at least one course in Agricultural Engineering and in Entomology.

The Department of Veterinary Science offers service courses, but no curriculum leading to a degree. Students interested in a degree in this field should consult with the Dean regarding courses which are acceptable substitutes for requirements in certain schools of veterinary medicine.

CREDIT FOR PRACTICAL WORK

By previous arrangement with the head of the department and the Dean, students may, during their course of study, do practical work under competent supervision in any recognized agricultural or related pursuit, and upon returning to the College and rendering a satisfactory written report showing faithful service, will be entitled to one credit for each month of such work. Such credits may not total more than three. Practical work is especially important for students who have no farm experience. Even though they cannot procure employment under such competent supervision as will give college credit, they should secure work along the line in which they are majoring. Faculty members will assist as much as possible in securing such vacation employment.

PRACTICAL TRAINING FOR POSITIONS IN THE CITRUS INDUSTRY

Under an arrangement with the Citrus Experiment Station, Lake Alfred, a limited number of graduates are enabled to obtain practical training for positions in the citrus industry. Applicants accepted for this additional training serve for nominal compensation as laboratory and field assistants at the Station, and are accepted upon the basis of their ability, training, and adaptability for the work. The program of training includes work in the fields of production and of processing and ordinarily is for a period of two years in either field.

In the field of production, each trainee serves for approximately six months in each of four phases of the work, namely, soils and biochemistry, entomology, pathology, and fruit handling. In the field of processing there are likewise four phases of work, namely, bacteriological control work, chemical control work, mechanical operation, and by-products.

Since this program is to provide practical training, it is considered supplementary to the regular undergraduate citrus curriculum. Consequently no college credit is

assigned, but upon recommendation of the Vice-Director of the Station and of the Dean of the College of Agriculture, an appropriate certificate is awarded at the conclusion of the training period.

GRADUATION WITH HONORS

All applicants completing the residence requirements for a degree are eligible for consideration for honors and high honors. In computing honor point averages the work accepted in the Upper Division, or its equivalent, will be counted.

To graduate with honors a student must have an honor point average of 3.3 or above and be recommended by the Dean.

To graduate with high honors a student must have an honor point average of 3.5 or above, be in the highest 10 percent of his class, and be recommended by the head of the department and by the Dean.

CURRICULA

AGRICULTURAL CHEMISTRY

The curriculum in Agricultural Chemistry is designed to provide a broad general training in this field of chemistry. Sufficient specialization is afforded to prepare students to take positions as research workers in state or federal laboratories concerned with agricultural or biochemical problems. Other opportunities for graduates are to pursue work on an advanced degree or take positions as control chemists in the food processing, feed, or fertilizer industries.

Junior Year

Course	First Semester	Credits	Course	Second Semester	Credits
CY. 301	Organic Chemistry	4	CY. 302	Organic Chemistry	4
MS. 353	Differential Calculus	4	MS. 354	Integral Calculus	4
PS. 201	General Physics	3	PS. 202	General Physics	3
PS. 207	Laboratory for Physics	1	PS. 208	Laboratory for Physics	1
BCY. 305	Basic Introductory Bacteriology	3	*Electives		6
BCY. 307	Introductory Bacteriology Laboratory	1			18
		16			

Senior Year

ACY. 531	Agricultural Analysis	4	ACY. 532	Agricultural Analysis	4
CY. 401	Physical Chemistry	3	CY. 402	Physical Chemistry	3
CY. 405	Physical Chemistry	1	CY. 406	Physical Chemistry	1
CY. 481	Chemical Literature	½	CY. 482	Chemical Literature	½
CY. 415	Biochemistry	3	SCH. 201.	Effective Speaking	3
*Electives		6	*Electives		6
		17½			17½

*Suggested electives: AS. 201, AL. 312, AL. 427, BCY. 402, BCY. 403, FT. 431, FT. 432, SLS. 301.

AGRICULTURAL ECONOMICS

The curriculum in Agricultural Economics provides a student with training in the application of basic economic principles in production and marketing of agricultural products, the formulation of agricultural policies and the execution of local, state, and federal farm programs. By choosing appropriate electives within this curriculum students may prepare themselves to become (1) owners or managers of firms that produce, process, or market agricultural commodities; (2) teachers or research workers (after acquiring advanced degrees); (3) employees of business firms handling agricultural products; and (4) public servants in the capacity of farm management or marketing specialists, commodity analysts, market news reporters, inspectors, credit analysts, etc. To qualify for graduate assistantships, scholarships, fellowships, civil service positions, and industrial research workers, agricultural economics majors are generally

required to have at least 24 semester hours of Agricultural Economics, including 2 semesters training in Statistics.

Junior Year*

Course	First Semester	Credits	Course	Second Semester	Credits
AS. 306—Farm Management or AS. 308—Marketing		3	AS. 306—Farm Management or AS. 308—Marketing		3
AS. 310—Agricultural Statistics		3	Agricultural Economics Electives		3
Other Agriculture[1]		6	Other Agriculture[1]		6
Electives[2]		5	Electives[2]		5
		17			17

Senior Year

Agricultural Economics Electives		6	Agricultural Economics Electives		6
ES. 407—Economic Principles and Problems		3	ES. 408—Economic Principles and Problems[3]		3
Other Agriculture[1]		3	Electives[2]		8
Electives[2]		5			
		17			17

*Students who have not completed AS. 201, ES. 201, and ATG. 211 or AS. 303, will be required to complete these courses in their junior year.

[1]A minimum of 15 hours of technical agricultural subjects is recommended from the following courses: AG. 301, AG. 303 or AG. 306; AL. 309; AY. 221 or AY. 324; EY. 203; PT. 321; FC. 201, VC. 201 VC. 212 or FC. 341; SLS. 301; FY. 313.

[2]Electives may be chosen in agricultural or non-agricultural subjects. The non-agricultural subjects especially recommended are mathematics, accounting, economics, public speaking, psychology, sociology, agricultural journalism and political science.

[3]Recommended for all students majoring in Agricultural Economics. Graduate students who have not completed ES. 407, ES. 408, AS. 310 and AS. 411, or their equivalents, in their under-graduate study will be required to take these courses or their equivalents in their graduate program.

AGRICULTURAL EDUCATION

The curriculum in Agricultural Education is designed to prepare students to be teachers of vocational agriculture as provided for under the Smith-Hughes and George-Barden Acts. Since the teaching in such positions covers all phases of agriculture, the curriculum contains courses from most agricultural departments.

Students desiring to register are advised to take the program of study recommended in the University College for Agricultural Education.

Junior Year

Course	First Semester	Credits	Course	Second Semester	Credits
AG. 303—Farm Shop		3	AS. 306—Farm Management		3
FT. 230—Food Technology and Nutrition		3	AL. 314—Livestock Judging		2
FY. 313—Farm Forestry		3	AG. 306—Farm Machinery		3
AL. 309—General Animal Husbandry		3	EDS. 305—The Secondary School Today		3
EDF. 245—Human Growth and Development		3	EDV. 303—General Methods in Agriculture		3
EDV. 306—Vocational Education		3	Electives		2
		18			16

Senior Year

SLS. 301—Soils		3	SLS. 302—Soil Fertility		3
EY. 203 Economic Entomology		3	FC. 341—Citrus Growing		3
OH. 329—Landscape Gardening		3	AS. 308—Marketing		3
VY. 401—Farm Sanitation		3	AG. 407—Farm Shop Power Equipment		3
EDV. 409—Supervised Teaching in Agriculture		3	EDV. 410—Supervised Teaching in Agriculture		3
EDV. 411—Adult Education in Agriculture		2	EDV. 412—Course Organization in Vocational Agriculture		2
		17			17

AGRICULTURAL ENGINEERING

This curriculum in the Department of Agricultural Engineering is designed to give students basic training in agriculture with major emphasis on the application of engineering to problems of agriculture. Such training is increasingly needed with the increase in mechanization of farms, the demand for better farm structures, recognition of the need for soil and water conservation, and the extension of electrical service to

rural areas. Students electing this curriculum are prepared to serve agriculture in state and federal agencies in extension and soil and water conservation, in commercial advertising, sales and service for manufacturers and distributors of farm equipment, and in agricultural production as specialists in various phases of mechanized agriculture.

It is desirable for these students to elect PS. 110, MS. 325-327 and ML. 181 while in the University College. Electives in the upper division are principally from agriculture and the basic sciences.

See College of Engineering for curriculum leading to the degree of Bachelor of Agricultural Engineering.

Junior Year

Course	First Semester	Credits	Course	Second Semester	Credits
AG. 301	Drainage and Irrigation	3	AG. 302	Farm Motors	3
AG. 303	Farm Shop	3	AG. 306	Farm Machinery	3
EY. 203	Economic Entomology	3	AL. 309	General Animal Husbandry	
SLS. 301	Soils	3		or	
	Electives	5	PY. 201	Fundamentals in Poultry Production	3
		17	AS. 306	Farm Management	3
				Electives	5
					17

Senior Year

AG. 401	Farm Buildings	3	AG. 404	Agricultural Engineering Investigations	2
AG. 403	Agricultural Engineering Investigations	2	AG. 408	Soil and Water Conservation	3
AY. 221	General Field Crops	3	AG. 409	Seminar	1
	Electives	9	VC. 212	Vegetable Gardening	
		17		or	
			FC. 341	Citrus Growing	3
				Electives	8
					17

AGRONOMY

The curriculum in Agronomy is designed to give a broad training in the fundamentals of crop production, genetics, plant breeding, and experimental methods. It prepares students for general farming as well as positions in technical agronomy. Studies in crop production include improved varieties, environmental factors, rotation systems, seeding practices and weed control methods with field and forage crops. Genetics and plant breeding emphasize the fundamental principles of inheritance as applied to crop improvement. Courses in design of experiments and experimental statistics provide training in planning research projects and analysis of experimental data. Experiment Station plots, field trials and greenhouse experiments acquaint students with agronomic research.

Students intending to major in Agronomy should take, while in the University College, General Botany (BTY. 101 and BTY. 102) instead of C-6 as General Botany is prerequisite for Plant Pathology. For electives in agriculture the following are suggested: AY. 221, AS. 201, AL. 309 or PY. 201.

Junior Year

Course	First Semester	Credits	Course	Second Semester	Credits
AY. 221	General Field Crops	3	AL. 309	General Animal Husbandry	3
AY. 329	Genetics	3	AS. 306	Farm Management	3
SLS. 301	Soils	3	SLS. 302	Soil Fertility	3
CY. 123	Qualitative Analysis	3		Approved Electives	3
BLY. 181	General Zoology	4		Electives in Agronomy	5
	Approved Elective	1			17
		17			

Senior Year

BTY. 211	Plant Physiology	4	AG. 306	Farm Machinery	3
PT. 321	Plant Pathology	3	EY. 203	Economic Entomology	3
AY. 492	Agronomy Seminar	1		Approved Electives	8
	Approved Electives	4		Electives in Agronomy	3
	Electives in Agronomy	5			17
		17			

ANIMAL HUSBANDRY AND NUTRITION

The curriculum in Animal Husbandry gives fundamental training in the various phases of the production of beef cattle, swine, horses and sheep. Practical experience in the above phases is essential.

In addition, special consideration is given to meat products, the packing house industry, and the grading and marketing of meat and meat producing animals. Subjects in the basic sciences and related agricultural fields are required as a foundation for a study of animal breeding, physiology, nutrition, meats, production and management. Students majoring in Animal Husbandry are required to take CY. 121-122 and ACY. 208. AL. 312 should be taken as soon as prerequisites are completed. Students planning to do graduate work in animal nutrition should elect AL. 427 and should take CY. 301-302 instead of ACY. 208. Moreover they should also take CY. 217 and CY. 218 if at all possible.

Junior Year

Course	First Semester	Credits
SLS. 301	Soils	3
BCY. 305	Basic Introductory Bacteriology	3
BCY. 307	Introductory Bacteriology Laboratory	1
AL. 314	Livestock Judging	2
EY. 203	Economic Entomology	3
VY. 301	Veterinary Anatomy and Physiology	3
	**Electives	2
		17

Course	Second Semester	Credits
AS. 306	Farm Management	3
AL. 312	Feeds and Feeding	4
AL. 425	Advanced Livestock Judging	3
AY. 436	Pastures	3
	**Electives	4
		17

Senior Year

AY. 329	Applied Genetics	3
AL. 415	Meats and Meat Products*	3
AL. 421	Seminar	1
AL. 413	Swine Production*	3
VY. 401	Farm Sanitation and Disease Prevention	3
	**Electives	4
		17

AL. 322	Animal Breeding	3
AL. 411	Beef Production	3
AL. 426	Livestock Feeding	3
	***Electives	8
		17

*AL. 415 and AL. 413 can be taken either the first or second semester of the Senior year.
**Suggested electives Eh. 356, Fy. 313, Sch. 201, Jm. 320, As. 311, Bs. 233, Cy. 217, Cy. 218, Jm. 314, Py. 414, Dy. 412, Sls. 302, Sls. 406, and As. 420.
***As. 420 is strongly recommended.

BACTERIOLOGY

The curriculum in the Department of Bacteriology is designed to give students fundamental training in the field of microbiology, particularly emphasizing the bacteria, but including the viruses, rickettsiae, yeasts, and molds. When accompanied by suitable electives, the curriculum will prepare students for work in public health or diagnostic laboratories, pharmaceutical, dairy, or food industries, or U.S. Civil Service positions. It provides basic grounding for those wishing to pursue graduate work. The departmental major may lead to a degree in either the College of Agriculture or the College of Arts and Sciences. For the Agriculture major, the student will be expected to take appropriate agricultural courses, with staff advice, in addition to the electives required by the College.

The following courses, prerequisites to required upper division courses, should be completed prior to entering the upper division: CY. 121, 122, 123, or CY. 217, 218, General and Qualitative Chemistry; MS. 105, 106, Basic Mathematics; PS. 201, 202, General Physics; BLY. 161, 162, Biology Laboratory or BTY. 101, 102, General Botany; and FH. or GN. 133, 134, First Year Language.

For those anticipating graduate work, the election of courses in both French and German is strongly recommended.

Junior Year

Course	First Semester	Credits	Course	Second Semester	Credits
FH. or GN. 201	—Language	3	FH. or GN. 202	—Language	3
CY. 331	—Quantitative Analysis	4	BCY.	—Elective**	4
CY. 362-3	—Organic Chemistry	5		Electives*	9-11
BCY. 305	—Basic Introductory Bacteriology	3			16-18
BCY. 306	—Basic Bacteriology Laboratory	3			
		18			

Senior Year

BCY. 508	—Pathogenic Microbiology	4	BCY. 511	Immunology and Serology	4
BCY. 513	—Microbial Physiology	4	BCY.	—Elective**	4
CY. 415	—Biochemistry	5-7		Electives*	8-10
		16-18			16-18

*Students in the College of Agriculture must elect one course in each of several departments; an appropriate selection for majors in bacteriology includes: AS. 201, SLS. 301, FT. 332, and DY. 211. Some of these may be elected before admission to the Upper Division.

Students in the College of Arts and Sciences must elect 12 credits of course work in the humanities, social sciences or physical sciences.

For other elective courses, the student is urged to consult with the staff of the Department.

**Elective courses include BCY. 400, 402, 403, 406; Dy. 423; SLS. 405. Exceptionally well-qualified seniors may elect BCY. 504 or BCY. 515.

BOTANY

The curriculum in botany is designed for both Agriculture and Arts and Sciences students and leads to a degree in either College. It gives the fundamental training in the basic plant sciences which will aid in applied and technical plant sciences as well as in other biological sciences and advanced botanical sciences.

Students in Agriculture and Arts and Sciences who major in botany should take BTY. 101 and 102 while in the University College. Also, while in the University College, students majoring in botany will take the courses required for Agriculture, and those planning the Arts and Sciences degree with a botany major will take the courses prescribed by that college. In addition to BTY. 101 and 102, students planning to major in botany will take a minimum of 20 credit hours, including the required courses and electives selected with approval of head of the department or the major professor of his curriculum.

Junior Year

Course	First Semester	Credits	Course	Second Semester	Credits
BTY. 305	—Lower Plants Taxonomy and Morphology	3	BTY. 306	—Higher Plants Taxonomy and Morphology	3
BTY. 211	—Plant Physiology	4	BTY. 432	—Plant Anatomy	4
	Electives	10		Electives	10
		17			17

Senior Year

Electives in Botany		3	Electives in Botany		3
Electives		14	Electives		14
		17			17

DAIRY SCIENCE

The curricula in Dairy Husbandry and Dairy Manufactures are designed to give technical and practical training in the various phases of Dairy Science which include the production of milk and the manufacture of dairy products. Students desiring information regarding opportunities in Dairy Science or needing help in planning their course of study should confer with the head of the department. Each student will be provided a list of recommended and approved electives selected according to his individual desires and career objectives. A modern dairy farm unit and dairy industry building provide excellent facilities for training.

The head of the department will assist students in obtaining commercial summer

employment in order to obtain practical experience. Credit may be earned for such work by prior arrangement with the Dean of the College of Agriculture.

(a) Major in Dairy Husbandry

The curriculum in Dairy Husbandry is planned to provide fundamental training in the science of milk production and in the handling of milk. Graduates find employment in dairy organizations in many areas including production, processing, sales and with research agencies. The completion of this curriculum leading to the B.S.A. degree prepares a student for further work at the graduate level.

Junior Year

Course	First Semester	Credits	Course	Second Semester	Credits
BCY. 305	Basic Introductory Bacteriology	3	AS. 306	Farm Management	3
BCY. 307	Introductory Bacteriology Laboratory	1	AL. 312	Feeds and Feeding	4
VY. 301	Anatomy and Physiology	3	AY. 324	Forage and Cover Crops	3
SLS. 301	Soils	3	AG. 306	Farm Machinery	3
AY. 329	Applied Genetics	3	DY. 310	Dairy Products Processing	4
DY. 318	Grading and Judging Dairy Products	2			17
	Electives	2			
		17			

Senior Year

AL. 427	Elementary Nutrition	4	AY. 426	Pastures	3
DY. 410	Dairy Cattle Judging and Breeds	2	DY. 412	Milk Production	3
DY. 411	Dairy Cattle Management	3	DY. 422	Milk Secretion	2
DY. 408	Dairy Industry Review	1	DY. 421	Dairy Seminar	1
DY. 423	Applied Dairy Microbiology	3		Electives	8
DY. 424	Advanced Dairy Breeds	3			17
	Electives	1			
		17			

(b) Major in Dairy Manufactures

The curriculum in Dairy Manufactures is planned for students who are interested in either the commercial or technical aspects of the manufacture of dairy products. The curriculum is broad and flexible, permitting selection of courses for specialized training which qualifies graduates for responsible positions in one or more of the following fields of dairy manufacturing: (1) Merchandising dairy products, supplies and equipment; (2) Dairy plant operation; (3) Dairy plant management; (4) Dairy technology; (5) Dairy engineering; (6) Graduate work, research and teaching.

Junior Year

Course	First Semester	Credits	Course	Second Semester	Credits
AS. 308	Marketing	3	SLS. 301	Soils	3
EY. 203	Economic Entomology	3	DY. 310	Dairy Products Processing	4
BCY. 305	Basic Introductory Bacteriology	3	DY. 312	Technical Control of Dairy Products	3
BCY. 307	Introductory Bacteriology Laboratory	1		Electives	7
DY. 318	Grading and Judging Dairy Products	2			17
	Electives	5			
		17			

Senior Year

FT. 431	Food Technology	3	DY. 421	Dairy Seminar	1
AG. 406	Dairy Engineering	3	DY. 412	Milk Production	3
DY. 408	Dairy Industry Review	1	DY. 416	Dairy Technology	3
DY. 423	Applied Dairy Microbiology	3		Electives	10
	Electives	7			17
		17			

ENTOMOLOGY

There are two core curricula for this department which are indicated as Curriculum A and Curriculum B. Students should confer with the Head of the Department relative to curricula requirements and acceptable variations.

Curriculum A is flexible thereby permitting the student to make a wide selection of courses. The proper selection of electives will enable a student to train for one of the following phases of the profession: 1. Medical and Veterinary Entomology (Insects affecting man and animals). 2. Industrial Entomology (The control of pests in industrial plants). 3. Horticultural Entomology (Insects affecting fruit, vegetable, and field crops). 4. Legal phase of Entomology or Plant Quarantine and Inspection (Principles involved in the enforcement of laws which are designed to prevent the movement of pests and pest infested material). 5. Forest Entomology. 6. Commercial Entomology and Structural Pest Control (The sale of insecticides and control of pests in or affecting structures). 7. Research and Graduate Work. Copies of guidance curricula for the aforementioned fields of specialization may be obtained from the Department. The student should obtain proper departmental guidance in the selection of electives in agricultural and non-agricultural fields, taken either in Lower or Upper Division. This procedure will assure that they best meet the educational objectives of the student. The proper selection of electives will enable a student to secure a major in Entomology and in some related field.

Curriculum B is not as flexible as Curriculum A. However, the student may make certain substitutions in this curriculum, but such substitutions must have written approval. This curriculum is designed to give the student a strong training in several basic science fields together with specialized training in entomology, thereby preparing him for entrance into the more academic aspects of entomology such as insect morphology and physiology, insect taxonomy, insect ecology, insect histology, insect pathology, and medical entomology.

CURRICULUM A

1. Entomology

	Credits		Credits
EY. 311-312-313-314—Seminar	2	EY. 441—Plant Quarantine, Inspection, and Control	3
EY. 405—Insect Control	3	EY. 460—Insect Identification	3
EY. 408—Insect Morphology & Physiology	4	EY. 462—Insect Ecology	2
EY. 422—Veterinary Entomology	2		
EY. 432—Florida Fruit and Vegetable Insects	3		22

2. General Electives
34 hours may be selected from entomology and closely supporting sciences. The student must have at least one course in five other departments of the College of Agriculture. When deemed advisable some of the general electives may be selected from other fields that may contribute to the background necessary for a particular specialized training 34

3. Free Electives* — From non-science departments 12

TOTAL 68

*Any substitutions must have written approval.

CURRICULUM B

1. Entomology

	Credits		Credits
EY. 311-312-313-314—Seminar	2	EY. 460—Insect Identification	3
EY. 408—Insect Morphology & Physiology	4	EY. 462—Insect Ecology	2
EY. 420—Medical Entomology	3	EY. 464—Biological & Natural Control	2
EY. 430—Insect Laboratory Technique	1	EY. 470—The Experimental Method	2
			19

2. Zoology*

	Credits
BLY. 208—Invertebrate Zoology	4
BLY. 209—Comparative Vertebrate Anatomy	4
BLY. 513—Mammalogy	3
	11

11

*The eleven hours indicated here plus BLY. 181, or C-61-62 and BLY. 161-162 which are required in University College for Curriculum B will provide the student with 21 semester hours credit in basic zoology.

3. Botany and Bacteriology*

	Credits
BCY. 300—Bacteria in Everyday Life or BCY. 305—Basic Introductory Bacteriology	3
BTY. 305-306—Lower and Higher Plants	6
	9

9

*The nine hours indicated here plus BTY. 101-102 which is required in the University College will provide 16 hours in these closely related fields.

4. Agriculture

	Credits		Credits
AS. 201—Principles of Agricultural Economics	3	PT. 321—Plant Pathology	3
SLS. 301—Soils	3	AY. 329—Genetics	3
		AL. 427—Elementary Nutrition	3
			15

5. Free Electives

Fourteen hours from non-science departments. When deemed advisable they may be selected from science subjects that may enhance the student's background for his specialization. This requires written approval of the Head of the Department 14

6. Foreign Language

Pass reading examination in either German, French, or Spanish; or by the successful completion of 6 semester hours of work in either of these languages.

TOTAL 68

FOOD TECHNOLOGY AND NUTRITION

The curriculum in Food Technology and Nutrition is designed to give broad training in the basic sciences and specialized training in the application to the food industries, particularly citrus. When accompanied by appropriate electives, the curriculum will prepare students for employment in (1) quality control and food analysis; (2) governmental food inspection and grading; (3) research, supervisory, and technical positions in food processing plants; and (4) technical sales in the food industries.

Junior Year

First Semester	Credits	Second Semester	Credits
FT. 301.—Food Technology	3	FT. 302.—Food Technology	3
BCY. 305.—Basic Introductory Bacteriology	3	FT. 332.—Food Examination	3
BCY. 306.—Basic Bacteriology Laboratory	3	CY. 302.—Organic Chemistry	4
CY. 301.—Organic Chemistry	4	DY. 310.—Dairy Products Processing	4
Electives	3-5	Electives	2-4
	16-18		16-18

Senior Year

FT. 411.—Citrus Preservation	3	FT. 422.—Food Science Literature	1
BCY. 403.—Food Microbiology	4	FT. 412.—Citrus Products Examination	3
*AG. 406.—Dairy Engineering	3	AS. 408.—Marketing Fruits and Vegetables	3
AL. 415.—Meats and Meat Products	4	Electives	10
Electives	3		17
	17		

*or other approved elective

FRUIT CROPS

Three curricula are offered in the Department of Fruit Crops to fit the needs of students planning to specialize in this general field. Opportunity is offered in all curricula for electing courses which will further strengthen the training of the students in related fields or in other fields of special interest.

Students wishing to specialize in tropical fruit culture should take the Citrus Production curriculum but substitute FC. 341, 423 and 424 for FC. 336, 437, 439, and 440.

These curricula have been carefully planned to give beginning students proper guidance so they will arrive as Fruit Crops majors with the proper background of required courses in their particular field of specialization. Lower division students are urged to follow these curricula carefully and to consult with the Department Head concerning any curriculum problems.

(a) Major in Citrus Production

This curriculum is planned to meet the needs of the student who wishes to engage in citrus grove management or grove advisory service for fertilizer and pesticide companies and offers, in addition to the major citrus courses, foundation courses in soils, plant pathology, entomology and marketing.

Junior Year

Course	First Semester	Credits
Fc. 335	Introduction to Citrus Culture	2
Sls. 301	Soils	3
As. 303	Farm Records	3
Pt. 321	Plant Pathology	3
As. 311	Rural Law	2
	or	or
Bs. 401	Business Law	3
	Approved elective	3 or 4
		17

Course	Second Semester	Credits
Fc. 336	Citrus Nursery and Young Non-Bearing Grove	3
Sls. 302.	Soil Fertility	3
Ag. 301	Drainage and Irrigation	3
Ey. 432	Florida Fruit and Veg. Insects	3
	Approved electives	5
		17

Senior Year

Fc. 437	Citrus Maturity and Packinghouse Proc.	3
Fc. 439	Citriculture	4
Fc. 403	Physiology of Fruit Production	3
Sls. 406	Soils and Fertilizers	3
	Approved electives	4
		17

Fc. 440	Citriculture	4
As. 408	Marketing Fruits and Vegetables	3
Pt. 433	Citrus Diseases	3
	Approved electives	7
		17

(b) Major in Fruit Crops Research

This curriculum is offered for students who wish to prepare for a research career. It is designed to give the student an adequate background in chemistry, physics, mathematics and plant and allied sciences to enable him to decide upon any field of plant science specialization he may care to enter. There is a great need for people adequately trained to do research in plant science fields, and this curriculum is especially designed for students wishing to continue their study toward the Master of Science or Doctor of Philosophy degree.

Junior Year

Course	First Semester	Credits
Cy. 301	Organic Chemistry	4
Pt. 321	Plant Pathology	3
Al. 309	General Animal Husbandry	3
Sls. 301	Soils	3
Fc. 335	Introduction to Citrus Culture	2
	Electives	3
		18

Course	Second Semester	Credits
Cy. 302	Organic Chemistry	4
Bcy. 305	Basic Introductory Bacteriology	3
Bcy. 307	Introductory Bacteriology Laboratory	1
Bty. 211	Elementary Plant Physiology	4
Sls. 302	Soil Fertility	3
Fc. 336	Citrus Nursery and Non-Bearing Grove	3
		18

Senior Year

Fc. 403—Physiology of Fruit Production	3	Ay. 452—Experimental Methods	3
Fc. 439—Citriculture	4	Fc. 440—Citriculture	4
Sls. 402—Advanced Soil Fertility	3	Cy. 317—Physical Chemistry	4
Electives	6	Electives	5
	16		16

(c) Major in Fruit Packinghouse Management and Marketing

(Offered in cooperation with the Department of Agricultural Economics)

This curriculum is offered for students who may be especially interested in fresh fruit marketing and/or packinghouse management. Students following this curriculum may graduate with a major in both Fruit Crops and in Agricultural Economics, and will have received basic training in preparation for positions in citrus cooperatives, marketing and sales organizations and/or private corporations.

Junior Year

Course First Semester	Credits	Course Second Semester	Credits
Fc. 335—Introduction to Citrus Culture	2	Fc. 341—Citrus Growing	3
As. 201—Principles of Agric. Economics	3	Sls. 302—Soil Fertility	3
Pt. 321—Plant Pathology	3	Pt. 423—Fruit Diseases	3
Atg. 211—Elementary Accounting	3	Atg. 212—Elementary Accounting	3
Sls. 301—Soils	3	Approved course in Agri. Eng.	3
Ms. 208—Business Mathematics	3	Approved elective	2
	17		17

Senior Year

Fc. 437—Citrus Maturity and Packinghouse Proc.	3	Fc. 438—Citrus Packinghouse Management	3
Fc. 423—Major Tropical Fruits	3	As. 408—Marketing Fruits and Vegetables	3
As. 409—Cooperative Marketing	3	As. 414—Terminal Markets	
Bs. 401—Business Law	3	Bs. 402—Business Law	3
Approved course in field of Horticulture	3	Atg. 410—Managerial Accounting and Budg.	3
Approved elective	2	Approved electives	4
	17		17

GENERAL AGRICULTURE

The curriculum in General Agriculture is designed to give a broad basic training in agriculture. In addition to subject matter that touches many fields of agricultural science and practice, courses in Agricultural Extension acquaint students with agricultural organizations, their functions, and programs.

Students intending to pursue studies in General Agriculture should take, while in the University College, General Botany (BTY. 101 and BTY. 102) instead of C-6, as General Botany is prerequisite for Plant Pathology. For electives in agriculture the following are suggested: AY. 221, AS. 201, AL. 309 or PY. 201.

Junior Year

Course First Semester	Credits	Course Second Semester	Credits
AY. 221—General Field Crops	3	AXT. 301—Rural Leadership	3
AG. 302—Farm Motors	3	AY. 324—Forage and Cover Crops	3
PY. 201—Fundamentals of Poultry Production	3	AS. 306—Farm Management	3
SLS. 301—Soils	3	SLS. 302—Soil Fertility	3
BLY. 181—General Zoology	4	*Electives	5
*Electives	1		17
	17		

Senior Year

VY. 401—Farm Sanitation and Disease Prevention	3	AS. 308—Marketing	3
FY. 313—Farm Forestry	3	VC. 212—Vegetable Gardening	3
PT. 321—Plant Pathology	3	EY. 203—Economic Entomology	3
*Electives	8	JM. 320—Agricultural Journalism	3
	17	*Electives	5
			17

*Suggested Electives: AG. 301, AL. 312, AS. 413, AXT. 407, FC. 341, PHA. 324, SLS. 406.

ORNAMENTAL HORTICULTURE

The field of ornamental horticulture is concerned with the application of basic scientific principles of the production, handling, marketing, and use of cut flowers, pot plants, foliage plants, nursery stock, and turf. The favorable climatic conditions of Florida are conducive to the production of a wide variety of ornamental crops and these enterprises are expanding rapidly in Florida. There is a distinct opportunity for professionally-trained workers in this field.

Adequate facilities are available for teaching and instruction in ornamental horticulture including classrooms and laboratory space in McCarty Hall and at the Archer Road Greenhouses, in addition to four greenhouses, a saran shade house, student nursery, field plot area, ornamental plantings. Advanced students will have ample opportunity to observe research work in progress in the greenhouses and in the field.

The basic curriculum can be adapted to the needs of the individual student and, under the guidance of his major professor, the student in ornamental horticulture may choose his field of specialization in his junior year; through the choice of technical electives, he may specialize in one of five options: ornamental horticulture, floriculture, nursery management, landscape nursery, and turf management.

Graduates in Ornamental Horticulture are prepared for positions as teachers and extension specialists; as managers of greenhouses, cut flower production units, flower shops, nurseries, golf courses, landscape maintenance, landscape nursery, and turf production and maintenance businesses. Further, they are qualified for research work with governmental agencies, seed and chemical companies. Qualified students may continue graduate work in these specialties.

Candidates for the Bachelor of Science in Agriculture Degree with a major in Ornamental Horticulture are required to have three months or equivalent of practical experience in a greenhouse, flower shop, nursery, landscape nursery, or retail sales unit.

Junior Year

Course	First Semester	Credits
OH. 331	Plant Materials	3
OH. 329	Landscape Gardening	3
OH. 362	Turf Management	3
Sls. 301	Soils	3
Pt. 321	Plant Pathology	3
	Approved Electives	3
		18

Course	Second Semester	Credits
Bty. 211	Plant Physiology	4
Sls. 302	Soil Fertility	3
Cy. 362-363	Organic Chemistry	5
	Approved Electives	6
		18

Senior Year

OH. 441	Commercial Floriculture	3
OH. 403	Seminar	1
Ey. 203	Economic Entomology	3
	Approved Electives	12
		18

OH. 499	Special Problems in Ornamental Horticulture	3
OH. 403	Seminar	1
Ag. 302	Farm Motors	3
As. 308	Marketing	3
	Approved Electives	8
		18

RECOMMENDED ELECTIVES FOR THE SEVERAL OPTIONS.

ORNAMENTAL HORTICULTURE:

Art 123, 124; Atg. 211; Ag. 306; Ay. 442, 452; Bs. 101, 233, 433; Bty. 306, 401; Eh. 133; Fc. 341, 424; OH. 319, 332, 352, 402, 420, 442; Sch. 201; Vc. 212, 405.

FLORICULTURE:

Art 123; Atg. 211; Ay. 452; Bs. 101, 233, 401, 433; Bty. 306, 401; Eh. 133; Fc. 341; OH. 319, 352, 402, 434, 442; Pt. 425; Sch. 201; Vc. 212, 405.

LANDSCAPE NURSERY:

Ae. 102, 203, 204; Art 123, 124, 311; Bs. 101, 233, 433; Bty. 306, 401; Cl. 233, 301; Eh. 133; Fc. 341, 424; Lae. 301, 302, 303, 311, 312, 313; OH. 319, 352, 402, 420, 430; Sch. 201; Vc. 212.

NURSERY MANAGEMENT:

Art 123; Atg. 211; Ay. 442, 452; Bs. 101, 233, 401, 433; Bty. 306, 401; Eh. 133; Fc. 341, 424; OH. 319, 332, 352, 402, 430, 462; Pt. 425; Sch. 201; Vc. 212, 405.

TURF MANAGEMENT:

Art 123, 311; Atg. 211; Ay. 329, 442, 452; Bcy. 305; Bem. 81, 82; Bs. 233, 401, 433; Bty. 401, 432; Cl. 233; Eh. 356; Fc. 341; OH. 319, 332, 430, 462; Pt. 421; Sch. 201; Sls. 402, 405, 406; Vc. 212.

PLANT PATHOLOGY

The curriculum in the department of plant pathology is arranged to acquaint students, through fundamental and progressive training, with plant diseases. Particular emphasis is given to those diseases caused by bacteria, fungi, viruses, nematodes and environmental factors, their diagnostic symptomatology, economic control and mycology of the causal agent. The course of study is broad and flexible permitting proper selection of courses for general or specialized training which qualifies graduates for independent activities in commercial business, county, state and federal civil service, teachers, research assistants and study toward advanced degrees.

The following courses should be completed during the freshman year for most satisfactory orientation, BTY 101-102; CY 121-122; C 11-12; C 31-32.

The student should consult faculty personnel in the plant pathology department for proper guidance in the selection of courses to be studied in the best sequence.

Junior Year

Course	First Semester	Credits	Course	Second Semester	Credits
PT. 321	Plant Pathology	3	Electives in Plant Pathology		3
	Electives	14	Electives		14
		17			17

Senior Year

Electives in Plant Pathology		3	PT. 434	Mycology	3
Electives		14		Electives	14
		17			17

POULTRY HUSBANDRY

The curriculum in poultry husbandry is designed to give a broad training in the field of poultry science. It is intended to prepare students to enter private or government work as poultry specialists, and is especially recommended for those students who desire to enter commercial business as poultry feed and equipment dealers and poultry marketing specialists.

Students majoring in poultry husbandry should consult with the Poultry Husbandry Department staff for special interests and approved electives. All poultry majors are required to take PY. 201, preferably in the sophomore year.

Junior Year

Course	First Semester	Credits	Course	Second Semester	Credits
AY. 329	Genetics	3	AS. 306	Farm Management	3
PY. 317	Marketing Poultry Products	3	AL. 312	Feeds and Feeding	4
PY. 319	Grading & Selecting Poultry & Poultry Products	1	PY. 312	Incubation, Brooding & Rearing	3
	Approved Electives	10		Approved Electives	7
		17			17

Senior Year

PY. 415	Poultry Management	3	PY. 414	Poultry Nutrition	2
PY. 421	Seminar	1	PY. 416	Poultry Management	3
PY. 427	Poultry Breeding	2	PY. 422	Seminar	1
PY. 429	Problems in Poultry Production	1-4	PY. 430	Problems in Poultry Production	1-4
	Approved Electives	6-9	VY. 402	Poultry Diseases	2
				Approved Electives	5-8
		17			17

SOILS

The department of soils offers three curricula. Each curriculum is designed to meet the individual needs of different groups of students. Students should consult the head of the department or the major professor of his curriculum for approval of electives in the field of specialization.

(a) Major in Soil Fertility and Management

The curriculum in soil fertility and management is designed to give the student a broad training in the fundamentals of general agriculture. Sufficient elective hours are provided so that in addition to thorough training in soils, any student may specialize in some closely allied line of work such as farm management, horticulture or animal production. This curriculum is specially designed for students who wish to obtain basic training in preparation for positions as farm managers and operators, or for work in the Agricultural Extension Service or the Soil Conservation Service. Students intending to major in soil fertility and management should take the following courses as their agricultural electives in the University College: AY. 221, General Field Crops; AL. 309, General Animal Husbandry; FC. 201, Principles of Horticulture; EY. 203, Economic Entomology; AS. 201, Agricultural Economics; and BTY. 101-102, General Botany.

Junior Year

Course	First Semester	Credits	Course	Second Semester	Credits
ACY. 208	Agricultural Biochemistry	3	CY. 123	Qualitative Analysis	3
SLS. 301	Soils	3	SLS. 302	Soil Fertility	3
	Electives*	11		Electives*	11
		17			17

Senior Year

SLS. 401	Soil Morphology and Classification	3	SLS. 402	Advanced Soil Fertility	3
SLS. 405	Soil Microbiology	3	SLS. 404	Soil Surveying	3
SLS. 400	Tropical Soils	2	SLS. 406	Soils and Fertilizers	3
	Electives*	9	SLS. 408	Soil and Water Conservation	3
		17		Electives*	5
					17

*Suggested electives: CY. 331, AY. 221, AY. 324, AG. 301, FC. 201, FC. 341, AS. 201, AL. 309, BCY. 300, GY. 203, PT. 321, AS. 306, FY. 313, EY. 203, BTY. 211. PY. 201.

(b) Major in Soil Chemistry or Microbiology

The curriculum in soil chemistry or microbiology is especially adapted for students who wish to do experimental work in soils, to teach in agricultural colleges or to do graduate work in soils. This curriculum provides carefully selected groups of courses in the basic sciences in addition to special courses in soils. Students intending to major in soil microbiology should elect BTY. 101-102, General Botany, instead of C-6, as well as the required agricultural electives in the University College. Students intending to major in soil chemistry should take MS. 105-106 instead of C-41-42, and take PS. 201-202 in addition to the Agricultural electives required in the University College.

Junior Year

Course	First Semester	Credits	Course	Second Semester	Credits
CY. 123	Qualitative Analysis	3	CY. 331	Quantitative Analysis	4
BCY. 300	Bacteria in Everyday Life	3	SLS. 302	Soil Fertility	3
SLS. 301	Soils	3		Electives*	10
	Electives*	8			17
		17			

Senior Year

ACY. 208—Agricultural Biochemistry	3
ACY. 531—Agricultural Analysis	3
SLS. 401—Soil Morphology and Classification	3
SLS. 405—Soil Microbiology	3
Electives*	5
	17

SLS. 402—Advanced Soil Fertility	3
SLS. 406—Soils and Fertilizers	3
SLS. 420—Special Problems in Soils	2
Electives*	9
	17

*For a major in Soil Chemistry the following course is required: BTY. 211.
For a major in Soil Microbiology the following courses are required: BCY. 306, BCY. 513, BTY. 211, PT. 321, and PT. 434.

(c) Major in Soil Surveying

The curriculum in soil surveying is designed especially to train students for positions as soil scientists in the U. S. Department of Agriculture, the Soil Conservation Service, State Soil Surveys, Land Bank Appraisers, and others. Students intending to major in soil surveying should elect PS. 110, Agricultural Physics, in the sophomore year. Also, the regular agricultural electives in the University College are required.

Junior Year

Course	First Semester	Credits
ACY. 208	Agricultural Biochemistry	3
GY. 203	Elements of Physical Geology	3
SLS. 301	Soils	3
GPY. 330	Maps, Charts, and Graphs	3
	Electives	5
		17

Course	Second Semester	Credits
CY. 123	Qualitative Analysis	3
GY. 204	Elements of Historical Geology	3
SLS. 302	Soil Fertility	3
AS. 306	Farm Management	3
	Electives	5
		17

Senior Year

SLS. 401—Soil Morphology and Classification	3
SLS. 405—Soil Microbiology	3
GY. 308—Mineralogy and Petrology	3
SLS. 400—Tropical Soils	2
Electives	6
	17

SLS. 404—Soil Surveying	3
SLS. 402—Advanced Soil Fertility	3
SLS. 408—Soils and Water Conservation	3
SLS. 406—Soils and Fertilizers	3
Electives	5
	17

VEGETABLE CROPS

The curriculum in vegetable crops is designed to give the student an adequate foundation of basic science which, together with specific courses in the production and marketing of vegetables, will prepare him for primary employment in the specialized vegetable industry. Sufficient elective hours are provided to enable students to prepare for graduate work or for employment in Agricultural Chemicals or related fields, the Agricultural Extension Service, or as research assistants.

Students planning a major in vegetable crops should consult with the head of the department, preferably at the beginning of the freshman year, for individual guidance in the selection of an elective program.

Junior Year

Course	First Semester	Credits
BTY. 211	Elementary Plant Physiology	4
SLS. 301	Soils	3
VC. 421	Commercial Vegetable Crops	3
	Approved Electives*	6
		16

Course	Second Semester	Credits
EY. 203	Economic Entomology	3
VC. 422	Commercial Vegetable Crops	3
	Approved Course in Agricultural Engineering	3
	Approved Electives	9
		18

Senior Year

VC. 405—Physiology of Herbaceous Crops	3
PT. 321—Plant Pathology	3
AY. 329—Genetics	3
Approved Electives*	9
	18

VC. 406—Handling Techniques and Practices in Marketing	3
AY. 422—Plant Breeding	3
PT. 422—Vegetable Diseases and/or EY 432—Florida Fruit and Vegetable Insects	3-6
AS. 408—Marketing Fruits and Vegetables	3
Approved Electives*	6-3
	18

*Suggested Electives include: AS. 308, AS. 311, ATG. 211, BTY. 401, FC. 341, FC. 423, FT. 230, FT. 431, OH. 429, PT. 426, SLS. 302, SLS. 402, SLS. 406.

COLLEGE OF ARCHITECTURE AND FINE ARTS

GENERAL STATEMENT

It is the purpose of the College of Architecture and Fine Arts to improve man's physical environment and enrich his life through education in the fields of Applied and Fine Arts. To that end the College provides professional education for useful service in the fields of Applied and Fine Arts, creative and cultural opportunities for students in other colleges of the University and appropriate services to the citizens of Florida in general.

Instruction in architecture was begun at the University of Florida upon the establishment of a School of Architecture by the late Rudolph Weaver, F.A.I.A., in 1925. A program in painting was added in 1929, and in the same year the school became an independent unit of the University known as the School of Architecture and Allied Arts. Work in commercial art was begun in 1932, in landscape architecture in 1933, and in building construction in 1935. In 1948 programs in interior design and in crafts were added, and the name of the School was changed to the College of Architecture and Allied Arts. A program in costume design was begun in 1952, and a program in history of art was instituted in 1953.

A graduate program was established in architecture in 1929. In 1948 graduate programs in building construction and in community planning were organized, and in 1950 a graduate program in fine arts was instituted. In 1949 the University Center of the Arts and the Bureau of Architectural and Community Research were formally organized.

In 1956 the College was reorganized. Two separate divisions were created: The Division of Architecture and Allied Arts, including the Departments of Architecture, Building Construction, Community Planning, and Interior Design; and the Division of Fine Arts, including the Departments of Art and Music.

PROFESSIONAL AND CULTURAL PROGRAMS

The College of Architecture and Fine Arts offers professional programs of study leading to appropriate undergraduate degrees in Architecture, Building Construction, Interior Design, Landscape Architecture, Painting and Drawing, Commercial Art, Crafts, Costume Design, History of Art, and Music. Each program is devised with the intention of giving thorough training in the fundamentals of the profession chosen, and the application of theory to practice is one of the chief teaching principles. Professional programs at the graduate level are offered in Architecture, in Building Construction, in Community planning, and in Art.

The College offers courses to students in other colleges of the University who wish to broaden their cultural background in the arts. General courses in the College are open to all students in the University.

UNIVERSITY CENTER OF THE ARTS

Educational and illustrative exhibitions sponsored by the College are a major contribution of the College to the University and to the State. A beginning has been made of a great teaching, research, and public service center known as the University Center of the Arts in which students, faculty, and the general public can study examples of outstanding contemporary work in the fields of applied and fine arts.

Each year a number of lectures and conferences of special interest to students in architecture and the fine arts are brought to the campus.

GENERAL REQUIREMENTS

Attendance.—Every student is expected to be present during all of the regular hours assigned for each course. Where conflicts occur and deviations are necessary for valid reasons, variations will be approved by the Dean.

Student Responsibility.—The student must assume full responsibility for registering for the proper courses and for fulfilling all requirements for his degree. The faculty will assist and advise, but the student must take the initiative and assume responsibility for managing his own affairs.

Language and Mathematics.—To qualify for a degree from this College each student will be expected to possess facility in the oral and written use of the English language, and to qualify for a degree in Architecture, Building Construction, or Landscape Architecture each student shall in addition, possess facility in the use of fundamental mathematics. These requirements shall be considered satisfied when the department concerned has certified such facility.

Elective Courses.—In order to broaden his general or professional education beyond the regular prescribed program a student may obtain permission to enroll in such additional courses as he may select.

Student Work.—All work submitted by students becomes the property of the College and may be retained for purposes of record, exhibition, or instruction. All projects must be done in the rooms of the College under the supervision of the faculty.

Graduation With Honors.—Students successfully completing the work of the College shall, according to the character of their work as adjudged by the faculty, receive diplomas of graduation, of graduation *With Honors,* or of graduation *With High Honors.*

FACILITIES FOR INSTRUCTION

Libraries.—The wealth of reading and audio-visual material in the general University Library is supplemented by the specialized reading room for Fine and Applied Arts which contains a working library of books, periodicals, color prints and slides, music listening rooms, and record libraries containing phonograph records, tape recordings and slides. Leading journals in Fine and Applied Arts from many foreign countries, as well as from the United States give sources of research to each department of the College.

BUREAU OF ARCHITECTURAL AND COMMUNITY RESEARCH

The College of Architecture and Fine Arts has established a Bureau of Architectural and Community Research to conduct and to coordinate research in those fields which concern the design of shelter and environment for all kinds of human activity. The Bureau provides an opportunity for graduate students and for faculty members to engage in research in architecture and in community planning, and to cooperate effectively in research projects with other departments of the University.

PROFESSIONAL AFFILIATIONS

The College is a member institution of the American Federation of Arts, the Association of Collegiate Schools of Architecture, the College Art Association, and the Society of Architectural Historians.

The Curriculum in Architecture is accredited by the National Architectural

Accrediting Board. Graduates in Architecture who have acquired the necessary practical experience are regularly admitted to the examinations of the Florida State Board of Architecture. Properly qualified persons may be admitted to the examinations of the National Council of Architectural Registration Boards. Graduates in Building Construction are admitted to examinations for General Contractors given by the various states and municipalities.

COUNSELING AND PERSONNEL PROGRAM

To assist students in the solution of problems which arise during their college careers, the College of Architecture and Fine Arts has established a counseling and personnel program. The purpose of the program is to assist the student in the selection of a field of study, to make available an understanding and sympathetic counselor to whom the student may turn for assistance in solving any of his problems, to assist in the selection of employment upon graduation, and to maintain contact with the student after graduation and assist him with his problems in the field.

STUDENT AID

Students interested in part-time employment, assistantships, scholarships, fellowships, loans, prizes, and awards are referred to the special bulletin distributed by the Dean of Men's Office, University of Florida, Gainesville, Florida.

TEACHERS CERTIFICATES

The College of Architecture and Fine Arts offers courses leading to certification in Art and Music for teaching Art in the secondary schools and for teaching Music in the public schools in grades 1 through 12 in the State of Florida. Regulations describing certification of teachers are published by the State Department of Education and it is imperative that all students who expect to be certified familiarize themselves with these regulations. Application for certification should be made immediately after graduation, and should be addressed to the State Superintendent of Public Instruction, Tallahassee, Florida.

PRACTICAL EXPERIENCE

Students are urged to spend their summers in the employ of practicing professionals in their particular field, or in some allied work which will give an insight into the problems of professional practice. Such employment provides an introduction to the methods of actual practice and enables the student to derive increased benefit from advanced work in school. Students should seek the counsel of their faculty advisor as to the type of practical experience best suited to their individual needs.

FIELD WORK

The Department of Building Construction recognizes the importance of practical experience to professional students in the design professions. In order to encourage students to obtain such experience before commencing their terminal programs, provision is made for students to receive credit for approved work in their field of major interest. By prior arrangement with the Dean and the Head of the Department, and subject to Faculty regulations governing field work, students admitted to professional curricula in the Department of Building Construction may earn up to three credits for field work upon the submission of the documents and reports prescribed by the regulations.

Each year a number of field trips are arranged to give the students an opportunity to broaden and extend their educational experience through study of construction projects of unusual interest or of outstanding works of architecture and art. Students frequently combine such studies with attendance at state and national meetings of the professional organizations in their respective fields.

Student Organizations.—Student organizations take an active part in the educational program of the College. Included in these organizations are the Florida Art Society, the Gargoyle Society, Sigma Lambda Chi, the Students' Contractors and Builders Association, the student chapter of the American Institute of Architects, the Music Educators National Conference student member Chapter No. 257, Kappa Kappa Psi and Tau Beta. The College encourages and assists students in promoting close relations with professional groups and societies in the several fields.

DEGREES AND CURRICULA

ADMISSION

All work of the freshman and sophomore years including the basic comprehensive courses and the courses prerequisite to the advanced work in the College of Architecture and Fine Arts is administered in the University College. For the freshman and sophomore programs of study, consult the section of the catalog entitled The Lower Division.

To enter the College of Architecture and Fine Arts and to register for one of the professional curricula, students must fulfill the following requirements:

1. Present a certificate of graduation from the University College or its equivalent as determined by the Board of University Examiners. An academic average of at least 2.0 is required.

2. Complete the appropriate program of freshman and sophomore courses as listed in the University College section of the catalog. To qualify for admission to the Upper Division courses in the College of Architecture and Fine Arts, the student must pass each pre-professional course work with a minimum academic grade of 2.0 (or C).

3. Have the approval of the Committee on Admissions of the College of Architecture and Fine Arts.

The Committee on Admissions of the College will consider requests for admission from students who do not meet the conditions stated above. However, students whose records in the Lower Division do not indicate that they are qualified to pursue with profit the professional work of the Upper Division will not be admitted to the College.

UNDERGRADUATE DEGREES

In Architecture, the degree conferred is Bachelor of Architecture. The work for this degree nominally requires three academic years beyond the University College.

In Building Construction, the degree conferred is Bachelor of Building Construction; in Landscape Architecture, the degree conferred is Bachelor of Landscape Architecture; in Interior Design, the degree conferred is Bachelor of Design. Each of these programs nominally requires two academic years beyond the University College.

In Painting and Drawing, History of Art, and Music, the degree conferred is Bachelor of Fine Arts. In Commercial Art, in Costume Design, and in Crafts, the

degree conferred is Bachelor of Design. The work for each of these programs nominally requires two academic years beyond the University College.

The requirements for the degree of Bachelor of Arts with a major in Art or Music are described under the College of Arts and Sciences.

The requirements for the degree of Bachelor of Arts in Education with Art or Music as an area of concentration are described under the College of Education.

GRADUATE DEGREES

The Graduate School offers the degrees of Master of Arts in Architecture, Master of Science in Building Construction, Master of Science in Community Planning and Master of Fine Arts. To meet the needs and goals of each student, graduate programs are prepared individually in consultation with a designated member of the Graduate Faculty of the College of Architecture and Fine Arts. For further information, see the section of the catalog entitled The Graduate School.

Architecture.—The major may be in architectural design, architectural research, building construction, or structural design of buildings. Holders of the five-year undergraduate degree in Architecture may normally complete the requirements for the master's degree in one academic year.

Building Construction.—The major may be in building construction, building research, or structural design of buildings. Holders of the four-year undergraduate degree in Building Construction or its equivalent may normally complete the requirements for the master's degree in one academic year.

Community Planning.—The program in Planning is administered by the Graduate Faculty in Community Planning, an inter-departmental faculty representing the agencies, departments, and colleges of the University concerned with urban and rural planning. For further information, see the section of the catalog entitled The Graduate School.

Art.—The major may be in Painting and Drawing, or in Crafts. The time necessary to complete the requirements for the master's degree will be determined by the preparation of the candidate.

I. CURRICULUM IN ARCHITECTURE

Leading to the Degree of Bachelor of Architecture

This curriculum is for students who desire to become architects or to enter some related field in which utility and beauty are combined objectives. The course prepares students to become draftsmen, designers, inspectors and superintendents of construction, specification writers, teachers, etc., or ultimately to become practicing architects or specialists in their chosen fields.

H. C. Rose, Advisor, Upper Division; J. D. McVoy, Advisor, Lower Division.

Admission.—To enter the College of Architecture and Fine Arts and to register for the curriculum in Architecture, students are required to meet the general admission requirements listed above and to have completed the following courses as part of their basic program in the University College:

MS. 105–106—Basic Mathematics, 4-4 credits
AE. 101 —The Arts of Design, 3 credits
AE. 102 —Vision and Graphics I, 3 credits
PS. 201–202—General Physics, 3-3 credits
AE. 203 —Vision and Graphics, II, 3 credits
AE. 204 —Basic Design, 3 credits
AE. 205–206—Building Technology, 3-3 credits

Requirements for the Degree—To qualify for the degree of Bachelor of Architecture a student must complete the following courses:

Third Year

First Semester	Credits	Second Semester	Credits
AE. 301-302-303-304-305.—Projects in Architecture, Group 1, consisting of 5 three-credit units	15	AE. 306-307-308-309-310.—Projects in Architecture, Group 2, consisting of 5 three-credit units	15

Fourth Year

First Semester	Credits	Second Semester	Credits
AE. 401-402-403-404-405.—Projects in Architecture, Group 3, consisting of 5 three-credit units	15	AE. 406-407-408-409-410.—Projects in Architecture, Group 4, consisting of 5 three-credit units	15

Fifth Year

First Semester	Credits	Second Semester	Credits
AE. 501-502-503-504-505.—Projects in Architecture, Group 5, consisting of 5 three-credit units	15	AE. 506-507-508-509-510.—Thesis in Architecture	15

II. CURRICULUM IN BUILDING CONSTRUCTION

Leading to the Degree of Bachelor of Building Construction

This curriculum is for students who are interested in the construction and erection of buildings rather than their architectural design, and who wish to prepare themselves to enter branches of the building industry such as building of houses and other structures, contracting, construction superintendency, estimating, structural designing, material production, and material and equipment distribution, service, or maintenance. H. H. Block, Advisor.

Admission.—To enter the College of Architecture and Fine Arts and to register for the curriculum in Building Construction, students are required to meet the general admission requirements listed above and to have completed the following courses as part of their basic program in the University College:

MS. 105–106—Basic Mathematics, 4-4 credits
AE. 101 —The Arts of Design, 3 credits
AE. 102 —Vision and Graphics I, 3 credits
PS. 201–202—General Physics, 3-3 credits
AE. 203 —Vision and Graphics II, 3 credits
AE. 204 —Basic Design, 3 credits
AE. 205–206—Building Technology, 3-3 credits

Requirements for the Degree.—To qualify for the degree of Bachelor of Building Construction, a student must complete the following courses and a comphrehensive examination to the satisfaction of the faculty. The courses in Building Construction are essentially the same for all students, the only variation being in the choice of electives. In making these choices, as well as in selecting subjects for special investigation, students may emphasize the area of the construction industry they expect to enter upon graduation, such as: contract construction; residential construction; construction material and equipment production, distribution, or sales; structural design; quantity surveying and cost estimating; or the maintenance and repair of buildings and equipment.

Third Year

First Semester	Credits	Second Semester	Credits
BCN. 301-302-303-304.—Projects in Building Construction, Group 1, consisting of 4 three-credit units	12	BCN. 311-312-313-314.—Projects in Building Construction, Group 2, consisting of 4 three-Credit units	12
Approved Elective	3	Approved Elective	3
	15		15

Fourth Year

First Semester	Credits	Second Semester	Credits
BCN. 401-402-403-404.—Projects in Building Construction, Group 3, consisting of 4 three-credit units	12	BCN. 411-412-413-414.—Projects in Building Construction, Group 4, consisting of 4 three-credit units	12
Approved Elective	3	Approved Elective	3
	15		15

III. CURRICULUM IN LANDSCAPE ARCHITECTURE

Leading to the Degree of Bachelor of Landscape Architecture

This curriculum is designed to fit students for work in the arrangement and preservation of land areas for use and beauty. The aim is not only to prepare a graduate for immediate usefulness as an assistant to an established practitioner, but also to lay a foundation for his ultimate independent practice of the profession. H. R. Sebold, Advisor.

Admission.—To enter the College of Architecture and Fine Arts and to register for the curriculum in Landscape Architecture, students are required to meet the general admission requirements listed above and to have completed the following courses as part of their basic program in the University College:

MS. 105—Basic Mathematics, 4 credits
AE. 101—The Arts of Design, 3 credits
AE. 102—Vision and Graphics I, 3 credits
CL. 223—Surveying, 3 credits
CY. 109—Elements of Chemistry, 3 credits
AE. 203—Vision and Graphics II, 3 credits
AE. 204—Basic Design, 3 credits
AE. 205—Building Technology, 3 credits

Requirements for the Degree.—To qualify for the degree of Bachelor of Landscape Architecture a student must complete the following courses and a comprehensive examination to the satisfaction of the faculty.

Third Year

First Semester	Credits	Second Semester	Credits
LAE. 301-302-303-304.—Projects in Landscape Architecture, Group 1, consisting of 4 three-credit units	12	LAE. 311-312-313-314.—Projects in Landscape Architecture, Group 2, consisting of 4 three-credit units	12
BTY. 101—General Botany	3	SLS. 301—Soils	3
	15		15

Fourth Year

First Semester	Credits	Second Semester	Credits
LAE. 401-402-403-404.—Projects in Landscape Architecture, Group 3, consisting of 4 three-credit units	12	LAE. 411-412-413-414.—Projects in Landscape Architecture, Group 4, consisting of 4 three-credit units	12
HE. 429—Ornamental Horticulture	3	CPG. 501—Projects in Planning	3
	15		15

IV. CURRICULUM IN INTERIOR DESIGN

Leading to the Degree of Bachelor of Design

This curriculum is for students who desire to become professional interior designers in the domestic, commerical, and institutional fields, or who desire to engage in the merchandising, design, or manufacture of furniture and accessories. W. W. Shepard, Advisor.

Admission.—To enter the College of Architecture and Fine Arts and to register for the curriculum in Interior Design, students are required to meet the general admission requirements listed above and to have completed the following courses as part of their basic program in the University College:

AE. 101—The Arts of Design, 3 credits
AE. 102—Vision and Graphics I, 3 credits
AE. 203—Vision and Graphics II, 3 credits
AE. 204—Basic Design, 3 credits
AE. 205—Building Technology, 3 credits
Approved Elective, 3 credits.

Requirements for the Degree.—To qualify for the degree of Bachelor of Design a student must complete the following courses and a comprehensive examination to the satisfaction of the faculty.

Third Year

First Semester	Credits	Second Semester	Credits
IR. 301-302-303-304.—Projects in Interior Design, Group 1, consisting of 4 three-credit units	12	IR. 311-312-313-314.—Projects in Interior Design, Group 2, consisting of 4 three-credit units	12
Approved Electives	6	Approved Electives	6
	18		18

Fourth Year

First Semester	Credits	Second Semester	Credits
IR. 401-402-403-404.—Projects in Interior Design, Group 3, consisting of 4 three-credit units	12	IR. 411-412-413-414.—Projects in Interior Design Group 4, consisting of 4 three-credit units	12
Approved Elective	3	Approved Elective	3
	15		15

V. CURRICULUM IN PAINTING AND DRAWING

Leading to the Degree of Bachelor of Fine Arts

The purpose of this curriculum is to develop the student's creative and technical ability in pictorial art. Beginning with the fundamentals of drawing, design, and color, the work expands into a highly specialized study of pictorial art, including mural painting, figure painting, and portrait painting. The work is particularly fitted for those who wish to enter the fields of creative painting, illustration, or teaching. P. R. McIntosh, Advisor.

Admission.—To enter the College of Architecture and Fine Arts and to register for the curriculum in Painting and Drawing, students are required to meet the general admission requirements listed above and to have completed the following courses as part of their basic program in the University College:

ART 121—The Visual Arts, 3 credits
ART 123—Color and Design, 3 Credits
ART 124—Drawing and Visual Perception, 3 credits
ART 222—Materials and Spatial Design, 3 credits
ART 225—Scientific Contributions to Art, 3 credits
ART 226—Pictorial Composition, 3 credits

Requirements for the Degree.—To qualify for the degree of Bachelor of Fine Arts a student must complete the following courses to the satisfaction of the faculty.

Third Year

First Semester	Credits	Second Semester	Credits
ART 301—Design I	3	ART 302—Design II	3
ART 391—Ancient Art	3	ART 392—Medieval Art	3
ART 361—Lettering and Instrumental Drawing	3	ART 312—Freehand Drawing II	3
ART 311—Freehand Drawing I	3	ART 352—Painting II	3
ART 351—Painting I	3	Approved Electives	6
Approved Elective	3		18
	18		

Fourth Year

First Semester	Credits	Second Semester	Credits
ART 403—Design III	3	ART 404—Design IV	3
ART 493—Art of the Renaissance	3	ART 494—Modern Art	3
ART 413—Freehand Drawing III	3	ART 414—Graphic Arts	3
ART 453—Painting III	6	ART 454—Painting IV	6
Approved Elective	3	Approved Electives	3
	18		18

VI. CURRICULUM IN COMMERCIAL ART

Leading to the Degree of Bachelor of Design

The purpose of this curriculum is to prepare designers to work in the field of advertising design. Based on a broad foundation in drawing, design, and color, the work includes the usual arts in advertising, product development, layout and lettering, typography, and reproduction methods. In the advanced work, emphasis is placed on advertising design for newspapers and magazines, so that graduates are particularly fitted to enter the field of advertising art in any of its varied forms.

R. C. Craven, Advisor.

Admission.—To enter the College of Architecture and Fine Arts and to register for the curriculum in Commercial Art, students are required to meet the general admission requirements listed above and to have completed the following courses as part of their basic program in the University College:

ART 121—The Visual Arts, 3 credits
ART 123—Color and Design, 3 credits
ART 124—Drawing and Visual Perception, 3 credits
ART 222—Materials and Spatial Design, 3 credits
ART 225—Scientific Contributions to Art, 3 credits
ART 226—Pictorial Composition, 3 credits

Requirements for the Degree.—To qualify for the degree of Bachelor of Design the student must complete the following courses to the satisfaction of the faculty.

Third Year

First Semester	Credits	Second Semester	Credits
ART 301—Design I	3	ART 302—Design II	3
ART 311—Freehand Drawing I	3	ART 312—Freehand Drawing II	3
ART 391—Ancient Art	3	ART 392—Medieval Art	3
ART 360—Layout	3	ART 362—Advertising Design	3
ART 361—Lettering	3	Approved Electives	6
Approved Elective	3		18
	18		

Fourth Year

First Semester	Credits	Second Semester	Credits
ART 413—Freehand Drawing III	3	ART 403—Design III	3
ART 493—Art of the Renaissance	3	ART 494—Modern Art	3
ART 461-462-463—Projects in Advertising Design, Group 1, consisting of 3 three-credit units	9	ART 464-465-466—Projects in Advertising Design, Group 2, consisting of 3 three-credit units	9
Approved Elective	3	Approved Elective	3
	18		18

VII. CURRICULUM IN CRAFTS

Leading to the Degree of Bachelor of Design

This curriculum is provided for students who wish to enter a rapidly expanding field that offers unlimited opportunities for development. Work in Crafts includes ceramics, silver and copper work, leather work, and weaving. The course is designed to emphasize the basic problems of design with a study of the limitations and potentialities of the materials employed. Emphasis is placed on contemporary

production methods and the utilization of native Florida resources. Kenneth E. Peabody, Advisor.

Admission.—To enter the College of Architecture and Fine Arts and to register for the curriculum in Crafts, students are required to meet the general admission requirements listed above and to have completed the following courses as part of their basic program in the University College:

ART 121—The Visual Arts, 3 credits
ART 123—Color and Design, 3 credits
ART 124—Drawing and Visual Perception, 3 credits
ART 222—Materials and Spatial Design, 3 credits
ART 225—Scientific Contributions to Art, 3 credits
ART 226—Pictorial Composition, 3 credits

Requirements for the Degree.—To qualify for the degree of Bachelor of Design a student must complete the following courses to the satisfaction of the faculty.

Third Year

First Semester	Credits	Second Semester	Credits
ART 301—Design I	3	ART 322—Sculpture	3
ART 391—Ancient Art	3	ART 392—Medieval Art	3
ART 361—Lettering	3	ART 382—Crafts II	3
ART 381—Crafts I	3	ART 383—Jewelry and Metalwork I	3
Approved Electives	6	Approved Electives	6
	18		18

Fourth Year

First Semester	Credits	Second Semester	Credits
ART 493—Art of the Renaissance	3	ART 494—Modern Art	3
ART 481—Ceramics I	6	ART 482—Jewelry and Metalwork II	6
ART 483—Special Problems in Crafts I	3	ART 484—Special Problems in Crafts II	6
ART 414—Graphic Arts	3	Approved Elective	3
Approved Elective	3		18
	18		

VIII. CURRICULUM IN COSTUME DESIGN

Leading to the Degree of Bachelor of Design

This curriculum is provided for students who wish to prepare for careers in the expanding field of Costume Design either as professionals or as designers of clothing for themselves or their families. The work in Costume Design develops the student's ability, knowledge, and creativeness in practical problems and professional practices in art, costume construction, textiles, tailoring, fashion sketching, and workroom design. Completion of the course enables graduates to enter merchandising and retailing fields, custom and wholesale houses, fashion periodicals and pattern companies as sample makers, designers, fitters, sketchers, drapers, fashion coordinators, assistant buyers, and stylists. Agnes P. Borgia, Advisor.

Admission.—To enter the College of Architecture and Fine Arts and to register for the curriculum in Costume Design, students are required to meet the general admission requirements listed above and to have completed the following courses as part of their basic program in the University College:

ART 121—The Visual Arts, 3 credits
ART 123—Color and Design, 3 credits
ART 124—Drawing and Visual Perception, 3 credits
ART 222—Materials and Spatial Design, 3 credits
ART 290—Art Survey, 3 credits

Requirements for the Degree.—To qualify for the degree of Bachelor of Design a student must complete the following courses to the satisfaction of the faculty.

Third Year

First Semester	Credits	Second Semester	Credits
ART 311—Figure Drawing I	3	ART 334—Costume Construction II	6
ART 330—Patternmaking	3	ART 336—Fashion Fundamentals	3
ART 333—Costume Construction I	6	ART 337—Fashion Sketching I	3
ART 335—Textiles	3	ART 338—Draping	3
ART 339—Historic Costume	3	Approved Elective	3
	18		18

Fourth Year

First Semester	Credits	Second Semester	Credits
ART 413—Figure Drawing	3	ART 430—Tailoring	3
ART 433—Costume Construction III	6	ART 431—Design Studio	6
ART 435—Fashion Sketching II	3	ART 432—Studio Sketching	3
ART 438—Advanced Draping	3	ART 436—Fashion Sketching III	3
Approved Elective	3	Approved Elective	3
	18		18

IX. CURRICULUM IN HISTORY OF ART

Leading to the Degree of Bachelor of Fine Arts

The purpose of this curriculum is to develop the student's knowledge of and appreciation for the evolution of the fine arts through the ages. In basic courses, the student is introduced to the fundamentals of drawing, design, and color in order that he may better understand the problems of the world's great creative artists. Upon entering the College of Architecture and Fine Arts, the student begins his specialization in the field of History of Art and does concentrated work in all of the major areas of this subject including painting, sculpture, architecture, methods and media, and crafts. The work is particularly intended for those who wish to enter the fields of teaching or museum work as well as for those who plan careers as creative artists. Eugene Grissom, Advisor.

Admission.—To enter the College of Architecture and Fine Arts and to register for the curriculum in History of Art, students are required to meet the general admission requirements listed above and to have completed the following courses as part of their basic program of the University College:

ART 121—The Visual Arts, 3 credits
ART 123—Color and Design, 3 credits
ART 124—Drawing and Visual Perception, 3 credits
ART 222—Materials and Spatial Design, 3 credits
ART 225—Scientific Contributions to Art, 3 credits
ART 226—Pictorial Composition, 3 credits

Requirements for the Degree.—To qualify for the degree of Bachelor of Fine Arts a student must complete the following courses to the satisfaction of the faculty and must complete a comprehensive examination in History of Art.

Third Year

First Semester	Credits	Second Semester	Credits
ART 391—Ancient Art	3	ART 392—Medieval Art	3
ART 361—Lettering and Instrumental Drawing	3	ART 394—History of Sculpture	3
ART 393—Art of the Western World	3	HY. 202—History of World Civilizations, 1650 to the Present	3
HY 201—History of World Civilizations to 1650	3	Foreign Language	3
Foreign Language	3	Approved Electives	6
Approved Elective	3		18
	18		

Fourth Year

First Semester	Credits	Second Semester	Credits
ART 493—Art of the Renaissance	3	ART 494—Modern Art	3
ART 495—History of Painting	3	ART 496—History of Crafts and Craft Techniques	3
ART 497—History of Oriental Art	3	ART 498—Methods and Materials of the Artist	3
Foreign Language	3	Foreign Languages	3
Approved Electives	6	Approved Electives	6
	18		18

X. CURRICULUM IN MUSIC

Leading to the Degree of Bachelor of Fine Arts

The purpose of this curriculum is to prepare students to become musicians and music teachers both in private life and in the public schools. It is based on a broad yet concentrated foundation in music and includes work in theory of music, music literature, music education, applied music, and ensemble.

Students entering the University electing to major in this program will be required to take placement examinations in the following areas: (a) Theory of Music, (b) Musicology, (c) Piano, (d) Major instrument or voice. However, before the student may be admitted to a Departmental Major Program in Music in the College of Architecture and Fine Arts (his junior year), he must pass a proficiency examination in Piano.

For further information see the Head of the Department of Music.

Admission.—To enter the College of Architecture and Fine Arts and to register for the curriculum in Music, students are required to meet the general admission requirements listed above and to have completed the following courses as part of their basic program in the University College:

EDF. 225—Children and Culture, 3 credits
EDF. 245—Human Growth and Development, 3 credits
MSC. 101-102—Theory of Music, 6 credits
Applied Music in Courses above 100, 4 credits
Applied Music in Courses below 100, 2 credits
Ensemble, 4 credits

Requirements for the Degree.—To qualify for the degree of Bachelor of Fine Arts a student must complete the following courses to the satisfaction of the faculty.

Third Year

First Semester	Credits	Second Semester	Credits
MSC. 201—Theory of Music	3	MSC. 202—Theory of Music	3
MSC. 412—Survey of Music History	2	MSC. 413—Survey of Music History	2
MSC. 162—Introduction to Music Education	2	MSC. 260—Music Education in the Elementary School	3
Elective in Materials	3	MSC. 461—School Music Administration	3
Applied Music in Courses above 200	2	Applied Music in Courses above 200	2
Minor Instrument or Voice	1	Minor Instrument or Voice	1
Ensemble	1	Ensemble	1
Approved Electives	3		
	17		15

Fourth Year

First Semester	Credits	Second Semester	Credits
EDE. 400—Problems of Instructions	3	EDS. 405—Intern Teaching in the Secondary School (includes Music Education in the Secondary School)	15
EDS. 305—The Secondary School Today	3		
MSC. 405—Conducting	3		
Applied Music in Courses above 300	2		
Elective in Theory	2		
Approved Electives	3		
	16		15

Ensemble.—Membership in ensemble music groups is open to all students of the University, after consultation with the Director. One credit per semester is offered in each group. A maximum of 4 semester hours credit in Ensemble (MSC. 170-179) may be applied toward any Bachelors degree.

The following courses are offered: University Band, Choral Union, Men's Glee Club, Women's Glee Club, University Orchestra, Mixed Quartet, Male Quartet, Women's Sextet, String Quartet, String Trio, Woodwind Quintet, Brass Ensemble, and Two-piano Ensemble. These groups are organized to study and perform the standard repertoire written for the various vocal and instrumental combinations. Ensemble participation is a musical experience of inestimable worth.

Applied Music.—Applied Music is defined as lessons in voice and music instruments. Courses are offered in voice, piano, organ, violin, viola, violin-cello, string bass, flute, oboe, clarinet, bassoon, French horn, cornet, trombone, tuba, and percussion.

Method of Registration.—The student wishing to register for courses in Applied Music is to report to the Head of the Department of Music, who will designate a staff member as advisor to the student. This advisor will assist the student in outlining his program and will recommend the courses for which the student is best suited.

All students registering for Applied Music for the first time shall register in the first course number listed in that branch of Applied Music, i. e., initial enrollment for piano instruction is in MSC. 21 — Piano, 1 credit. However, if the student has had considerable previous experience on his chosen instrument or voice, he may, prior to registration, take a placement examination to determine the proper course in which to register.

Method of Instruction.—Applied music is taught by the project method. Each student applying for lessons is given a placement examination evaluating his native ability, knowledge of subjects, skill proficiency, and repertoire. When the student's accomplishment level or potential has been gauged, he is assigned to a teacher for private or class instruction. Credits earned are determined by examination at the end of each semester and are based upon the student's native talent, technical advancement and repertoire. A minimum of 3 hours weekly practice is required in courses numbering under 100. A minimum of 6 hours weekly practice is required in courses numbering over 100. Students registering in freshman, sophomore, junior, and senior courses may earn 2 credit hours each semester in any one branch of applied music. Students receiving failing grades for 2 consecutive semesters shall not be allowed to continue in Applied Music.

Fees.—The fees charged for Applied Music, instrument rental and practice room rental are listed elsewhere in this Catalog under *Expenses.*

THE COLLEGE OF ARTS AND SCIENCES

GENERAL STATEMENT

Culturally and Historically the programs of the College of Arts and Sciences represent the core of all higher education. The College grants its graduates the traditional Bachelor of Arts and Bachelor of Science degrees.

This College makes its contribution to the work of the world not only through the many facts and skills it imparts but also by providing the student with the fundamental knowledge upon which the professional colleges build.

A major aim of the College is liberal education. To this end it insists on evaluations of ideas and actions according to their impact on society. Intellectual inquiry is emphasized as a preparation for more competent living and the development of human leadership.

SUBJECT-MATTER FIELD

The subject-matter fields regularly offered to students in the College of Arts and Sciences and the extent of these offerings are indicated in the table below:

Subject	Elective Work	Group Major	Dept. Major	M.A. or M.S.	Ph.D.
Anthropology	X	X	X	—	—
Art	X	X	X	Graduate work offered through College of Architecture and Fine Arts.	
Astronomy	X	X	—	—	—
***Bacteriology	X	X	X	Graduate work offered through College of Agriculture.	
Biology	X	X	X	X	X
Botany	X	X	X	Graduate work offered through College of Agriculture.	
**Chemistry	X	X	X	X	X
Communications	X	Major and Graduate work offered in the School of Journalism and Communications.			
Economics	X	X	X	Graduate work offered through College of Business Administration.	
*Education	X	Major and Graduate work offered through the College of Education.			
English	X	X	X	X	X
Family Life	X	X	—	—	—
French	X	X	X	X	—
Geography	X	X	X	X	X
Geology	X	X	X	X	—
German	X	X	X	X	—

*Credit which may be offered for degree is limited. Detailed information may be obtained at the Office of the Dean.

**Also see the section below on requirements for the degree "Bachelor of Science in Chemistry."

***For undergraduate specialization in bacteriology see the material on BACTERIOLOGY in the the section of this Catalog for the College of Agriculture.

Subject	Elective Work	Group Major	Dept. Major	M.A. or M.S.	Ph.D.
Greek	X	X	X	—	—
History	X	X	X	X	X
Journalism	X	Major and Graduate work offered through the School of Journalism and Communications.			
Latin	X	X	X	X	—
Library Science	X	X	—	—	—
Mathematics	X	X	X	X	X
Meteorology	X	—	—	—	—
*Music	X	X	X	—	—
Philosophy	X	X	X	X	—
Physics	X	X	X	X	X
Political Science	X	X	X	X	X
Psychology	X	X	X	X	X
Religion	X	X	X	—	—
Russian	X	X	—	—	—
Sociology	X	X	X	X	X
Spanish	X	X	X	X	X
Speech	X	X	X	X	X
Zoology	See Biology listed above				

*Credit which may be offered for degree is limited. Detailed information may be obtained at the Office of the Dean.

UNIVERSITY COLLEGE PROGRAM

University College students who plan to enter the College of Arts and Sciences should:

1. Complete with satisfactory grades each of the "C" courses of the lower division or acceptable equivalent courses. This should be the first concern of future Arts and Sciences students.

2. Consult with the proposed major department as soon as they have chosen their major field.

3. Begin their foreign language requirements while registered in the University College.

4. Use the balance of their elective opportunities in the lower division in taking a selection of one and two hundred level courses in several Arts and Sciences departments. Arts and Sciences courses numbered three hundred or above are not available to lower division students except with written permission from the department offering them.

5. Study the following sections on Admission, Advisement Panel, and Requirements for Degrees.

ADMISSION

To be eligible for admission to the College of Arts and Sciences, students are required to have a 2.0 (C) average in all work attempted in the lower division, and to have demonstrated academic competency in all major areas of knowledge as presented in the work of the Comprehensive Courses of the University College or their equivalents.

If a student has completed the work of the University College and does not meet these admission requirements, he may register in the University College for a program of

Arts and Sciences courses prescribed by a member of the Advisement Panel of the College of Arts and Sciences. If at the end of the probationary period he has made no grade lower than "C" he will be admitted to the College of Arts and Sciences. If his work in this trial program is poor, his admission will be finally denied.

Transfer students who wish to enter the College of Arts and Sciences are referred to the Board of University Examiners in accordance with the provisions of the section of this catalog entitled Admissions.

ADVISEMENT PANEL

The College of Arts and Sciences maintains an Advisement Panel composed of faculty members representing each area of specialization offered by the College. Members of this panel are available for student conferences at regular hours each week. Each student registered in the College is given at least one regular appointment with his adviser each semester for the purpose of arranging his program for the next semester. However, students may see their advisers as often as is necessary. University College students planning to graduate from the College of Arts and Sciences should request the assignment of an adviser as early as possible in their university programs. Information regarding the advisement panel is available at the Office of the Dean.

Preprofessional Counseling Office: The College of Arts and Sciences maintains a Preprofessional Counselling Office for medical and allied fields in Room 12, Flint Hall. The purpose of this office is to provide advice, information and assistance for students in preparing themselves for professional work in the health sciences. The office obtains data, chiefly from instructors, on each student who registers as a preprofessional student, and on request supplies recommendations to professional schools for any applicant whose file is sufficiently complete. This system of recommending students has been in operation at the University for a number of years and professional schools expect to receive information from this office. It is essential, therefore, that each premedical and predental student register with the Preprofessional Counselling Office during the first few weeks of every semester so that sufficient data will be available for his recommendations.

Other services provided by the Preprofessional Office include: a reference file of catalogues of the Medical and Dental Colleges of the United States and Canada; a bulletin board for posting current information, not only on the Professional schools, but also on related matters such as the "Regional Plan," the Medical College Admissions Test, the Dental Aptitude Testing Program; and brochures and other material for students interested in Osteopathy, Optometry, Nursing, Medical Technology, Nutrition, Physical Therapy, Public Health, and Sanitary Science. Students are encouraged to make use of these services.

The various types of professional training which are offered in the Health Sciences have different prerequisites, both as to specific courses and as to the number of hours required for admission to the professional program. Students should, therefore, obtain information on the requirements of the particular field or fields in which they are interested so as to pursue a satisfactory program of preprofessional preparation.

REQUIREMENTS FOR DEGREES

BACHELOR OF ARTS AND BACHELOR OF SCIENCE

The programs which lead to the degrees Bachelor of Arts or Bachelor of Science are alike in all basic requirements. The requirements for graduation with either of these degrees are as follows:

A minimum of sixty-four semester hours credit with an average of C in all work transferred to or completed in the College is required. In this work must be included (1) either a departmental Major or a Group Major as described below, (2) satisfaction of the Language requirements as described below, and (3) at least twelve semester hours of approved electives as described below in the statement of the elective requirement. It is further required that in the entire program of studies of the student he shall have earned credit in each of the Comprehensive Courses of the University College or shall have earned an equal amount of credit in the area covered by each Comprehensive Course in which he does not present credit. It is also required that each student qualifying for a degree from the College shall possess facility in the oral and written use of the English language. This requirement will be considered satisfied when the department of the student's major has certified such facility.

The degree Bachelor of Arts will be conferred upon those who fulfill the requirements for degrees with majors in one or more of the fields of Anthropology, Art, Economics, English, Family Life, French, German, Greek, History, Latin, Library Science, Music, Philosophy, Political Science, Religion, Russian, Sociology, Spanish, and Speech.

The degree Bachelor of Science will be conferred upon those who fulfill the requirements for degrees with majors in one or more of the fields of Astronomy, Bacteriology, Biology, Botany, Chemistry, Geology, and Physics.

The degree of Bachelor of Arts or Bachelor of Science will be conferred upon those who fulfill the requirements for the degree with majors in one or more of the fields of Geography, Mathematics, and Psychology according as their remaining courses are selected predominantly from the other fields which lead to either one or the other degree.

The Departmental Major: Many students desire to specialize in some one subject-matter field. Such students should undertake to earn a departmental major. A departmental major consists of two parts, as follows: (1) Concentration consisting of not less than twenty-four and not more than thirty-two semester hours in one subject-matter field. This field is called the student's major field. Work in this field taken in the University Colllege or transferred to the University from another institution is included in evaluating the student's record for this requirement. However, all transfer credit in the major field must be approved by the major department and any such credit which is not approved as a part of the major will not apply toward the total credit requirement for the degree. No courses in the major field in which the grade earned is below C will be counted toward the fulfillment of the major requirement. (2) Such subsidiary courses from subject-matter fields other than the major field as are essential.

The Group Major: Group majors are provided for those students who do not desire the intensive concentration provided by a departmental major. The group major should not be taken by students planning to do graduate work. A group major consists of a total of not less than fourteen and not more than sixteen *semester courses* selected from a group of three related subject-matter fields, with at least four and not more than six semester courses in each*. No courses in any of these major fields in which the grade earned is below C will be counted toward the fulfillment of this requirement.

Foreign Language Requirement: All candidates for degrees awarded by the College

*In the field of Music the group major is not designated in terms of number of courses but requires twenty-four semester hours.

of Arts and Sciences are required to have a reading knowledge of some foreign language. This requirement may be satisfied by examination or by the successful completion of six semester hours of work in one foreign language in courses numbered 201-202 or higher.

When a student elects a foreign language as a departmental major he must satisfy this requirement by completing FLE 351-352 and six semester hours in one or two foreign languages other than the major. When a student elects a foreign language as one of the components of a group major, he may also satisfy the foreign language requirement by completing twelve semester hours of work in the same language in courses numbered 201-202 and higher.

In preparing to meet the foreign language requirement students are advised to complete the necessary courses in the University College, where such courses may be taken as electives.

Elective Requirement: The philosophy of the College of Arts and Sciences stresses the importance of an informed acquaintance with the major areas of human knowledge as well as a specialized preparation in one of these areas. In addition, therefore, to prescribing a certain specialization, the College also requires that as a part of his Upper Division program each student complete at least twelve semester hours in courses unrelated to the area of his specialization or the language in which he satisfies his foreign language requirement. For the interpretation of this requirement, these major areas are regarded as (1) the biological sciences; (2) the humanities; (3) the physical sciences, including mathematics; and (4) the social sciences. Students are advised to regard this requirement as a minimum and to plan a broad program in the College as a liberal background for their specialization.

BACHELOR OF SCIENCE IN CHEMISTRY

In addition to a departmental major and a group major including chemistry as a component, a special curriculum is offered leading to the degree "Bachelor of Science in Chemistry." This curriculum is designed for students who desire to make chemistry their vocation.

The requirements for this degree are as follows:

(1) Credit must be presented in each of the following courses:

CY. 217-218	General Chemistry and Qualitative Analysis	8
CY. 331-332	Quantitative Analysis	8
CY. 301-302	Organic Chemistry	8
CY. 401-402	Physical Chemistry	6
CY. 405-406	Physical Chemistry	2
CY. 411	Advanced Inorganic Chemistry	3
CY. 412	Advanced Physical Chemistry	3
CY. 415	Biochemistry	3
CY. 481	Chemical Literature	1
CY. 514	Advanced Organic Chemistry	4
PS. 205-206	General Physics	6
PS. 207-208	Laboratory For Physics	2
MS. 105-106	Basic Mathematics	8
MS. 353-354	Differential and Integral Calculus	8
GN. 133-134	First-Year German	6
GN. 201-202	Second-Year German	6
EH. 356	Report Writing	3

(2) At least twenty-five additional semester hours outside of the field of Chemistry, to be selected with the approval of the Dean.

(3) A student must earn a total of at least 78 semester hours in the Upper Division No grade below C in any course in Chemistry will be counted for the degree. No course in Chemistry other than those listed in (1) above, or equivalent, may be counted for this degree.

(4) All other regular requirements for the Bachelor of Science degree must be satisfied.

GRADUATION WITH HONORS AND HIGH HONORS

For graduation *With Honors* a student must earn an honor point average of 3.2 or higher in the work of the Upper Division.

The regulations concerning graduation *With High Honors* are administered by a faculty committee. This committee has the responsibility for preparing and administering a high honors examination to test the student's grasp of great events, achievements, and personalities in major fields of human interest. In general the committee will invite the highest ten percent (according to honor point average earned in the Upper Division) of the candidates for degrees to take the high honors examination.

Any degree candidate upon the recommendation of three faculty members may be invited to take the high honors examination. However, no student can be considered a candidate for high honors without the recommendation of his major department.

The committee will recommend to the Faculty, candidates who should be graduated with high honors, the recommendation to be based on: (a) excellence in the high honors examination; (b) honor point average; (c) distribution and quality of subject matter studied; (d) evaluation of the student by his teachers. In general not more than six percent of the candidates for degrees shall be graduated *with high honors.*

GENERAL REGULATIONS

Student Responsibility: Each student must assume full responsibility for registering for the proper courses and for fulfilling all requirements for his degree.

Seniors must file formal application for a degree in the Office of the Registrar and must pay the graduation fee early in the semester in which they expect to receive the degree; the official calendar shows the latest date on which this can be done.

Each student is responsible for completing all courses for which he is registered. Courses can be dropped or changed without penalty only through the offices of the Dean of the College and the Registrar.

The student's program of studies is subject to the approval of his advisor and the Dean.

Maximum and Minimum Loads: Sixteen or seventeen semester hours in any regular semester shall be considered a normal load. A student may be permitted to register for eighteen or nineteen semester hours when, in the opinion of his advisor, the quality of his record justifies this.

The minimum load for a regular full-time student in the Colllege of Arts and Sciences during a regular semester is twelve hours. At the time of registration, a student, with the approval of the Dean, may register for less than twelve semester hours. If a student wishes to drop courses during the semester thereby reducing his load below twelve semester hours, he must have the approval of the University Senate Committee on Student Petitions.

Credit for Course Work Outside the College: Ordinarily a student's credits for a degree in the College of Arts and Sciences are limited to courses in the subject-matter areas listed at the beginning of this section. However, on the recommendation of the student's advisor and with the approval of the Dean, a student may present a maximum of six semester hours of work for his degree from courses in subject-matter areas not listed under the College of Arts and Sciences.

Arts and Sciences students may satisfy the certification requirement for secondary teachers by taking a program of 24 hours of Education courses. Eighteen of these hours may be counted toward the Arts and Sciences degree.

Residence Requirement: The last thirty semester hours to be applied toward a degree must be completed in residence in the College of Arts and Sciences. In special cases this requirement may be waived, but in no case may the amount of extension or correspondence work permitted exceed twelve of the last thirty-six hours required for the degree.

Student Petitions: If a student feels that the College regulations work a peculiar hardship or injustice in his case, he may petition for waiver of the regulation involved. Information on procedure in submitting such petitions is available in the Office of the Dean.

University Student Regulations: The University issues a bulletin entitled *Student Regulations* which contains much information of essential importance to any student. For example, the general regulations governing military training and student employment are covered. Each student in the College of Arts and Sciences should be familiar with this material. Copies of the bulletin may be obtained at the Office of the Registrar.

SPECIAL PROGRAMS

PRE-PROFESSIONAL TRAINING

The College of Arts and Sciences offers pre-professional training necessary for admission to professional schools of Theology, Medicine, Dentistry, Law, and Library Science. Students interested in preparing for professional training in one of these areas will be referred to an appropriate advisor.

AMERICAN AREA STUDIES PROGRAM

This program is designed to give the student an extensive acquaintance with the cultural heritage and democratic philosophy of the United States. It is a flexible program in which the student and his advisor arrange an elective sequence around a major in any field of study in the College of Arts and Sciences. This elective program will include courses in American and World History, American and English Literature, American Philosophy, American Government, the Economics of American Life, American Social Problems, the Geography of Anglo-America, and Religion in American Life.

The program should be begun in University College. Students are referred to Dr. Harry R. Warfel for advisement in connection with this program.

LATIN-AMERICAN AREA STUDIES PROGRAM

The College of Arts and Sciences offers this program as its particular contribution to the interest of the University in promoting the State's leadership in Latin-American affairs, and as a liberal foundation for advanced study under the direction of the Graduate School of Inter-American Studies. All students interested in this program, including those enrolled in the University College, should consult with the student advisor on Latin-American studies, Dr. L. N. McAlister, for assistance in planning their course of study.

The program consists of a group major leading to the degree of Bachelor of Arts. Courses appropriate to the program should be selected from the following fields: Anthropology, Art, Economics, Geography, History, Music, Political Science, Sociology, and Spanish.

SOCIAL ADMINISTRATION

This program provides training for beginning workers in social administration and a foundation for those desiring graduate work in this field. The program is so designed that the student is provided with a pre-professional background without sacrificing the advantages of a liberal education.

The program in social administration leads to the degree of Bachelor of Arts and all requirements for this degree must be met. The student has a choice of a departmental major in sociology, with appropriate subsidiary and free elective courses, or a group major taken from three of the following areas: Economics, History, Political Science, Psychology and Sociology. If a group major is selected, the twelve hours of required free electives must be chosen from courses outside the social sciences. University College electives recommended for students preparing to enter the program include: ATG 211-212, ES 203, ES 201-202, HY 202, PCL 201, SY 201, PSY 201, SCH 201.

Students interested in this program should confer with Dr. J. M. Maclachlan.

INTERNATIONAL AFFAIRS

This program provides a limited amount of professional preparation for careers in international affairs, including the "home service" and the Foreign Service of the Department of State, Central Intelligence Agency, the United Nations and its specialized agencies, and other international organizations. A command of one or more foreign languages is required for most of these positions. Such training is designed to lead to appointment as Foreign Service Officer, Foreign Affairs Officer, Intelligence Research Specialist, Foreign Affairs Analyst, etc. Admission to the Foreign Service is primarily through the Foreign Service Officer Examination; recruitment for other positions with the U. S. Government is through the U. S. Civil Service Commission. For further information the student should consult Dr. F. H. Hartmann.

It is important that in the University College the student preparing for a career in international affairs start at least one foreign language and take other courses listed below to complete his electives. The successful completion of C-1, C-2, C-3, C-4, C-5 and C-6 is required.

The recommended courses for preparation in international affairs include: Political Science 201, 209-210, 503-504, 507-508, 509 and 524; Geography 200, 300 and 481; History 245-246, 325-326; Economics 201-202, 203; English 202, 498 and 502.

If time permits and the student wishes further work along area lines, he may select, depending upon the area of interest, such courses as Political Science 522, 541, 542; Geography 485, 586, 587, 588, 589; History 333, 334, 371, 372, 381, 382. For the Foreign Service Officer Examination, credit of at least 18 hours in one language is necessary and a second language may be elected. French, Spanish, German and Russian are acceptable.

PUBLIC ADMINISTRATION

This program provides a limited amount of professional preparation in public administration for students who plan to terminate formal study with the Bachelor of Arts degree and a broad foundation for those preparing for graduate work in the field. Students who complete the program may secure employment with the Federal Government by passing the Junior Professional Assistant or Junior Management Assistant examinations, which are, however, highly competitive. Some administrative positions

with state and local governmental agencies are also available. Those who go on to the Master of Arts degree may qualify for advanced civil service examinations and for positions in the field of city management.

All requirements for the Degree of Bachelor of Arts with a departmental major in Political Science must be met. It is strongly urged that students begin work on the foreign language requirement and elect from Accounting 211-212, Economics 203 and 201-202, and Political Science 201-202 while in the University College. After admission to the College of Arts and Sciences the remainder of these courses should be taken, as should Political Science 511, 512, 515, 516 and Economics 327. Depending on the student's field of interest he should elect from History 245-246; Economics 321, 372, 404, 454, 477, 478; Business Administration 464, 474; Real Estate 491; Psychology 201, 205, 206, 211, 503, 504; Sociology 201, 203, 317, 326, 348, 525, 546, 550; Industrial Engineering 321, 322, 371; and Accounting 417.

The student should keep in mind the undesirability of excessive specialization and the College of Arts and Sciences requires that 12 hours of elective work be taken outside the social sciences and those areas that contribute directly to his vocational preparation. Additional information and help in planning course programs may be had by consulting Dr. Bruce B. Mason.

SPECIALIZATION IN THE FINE ARTS

Music: Students interested in programs of study in music in the College of Arts and Sciences may elect a Departmental Major or a Group Major.

The student who selects a Departmental Major in Music must earn a total of thirty-two semester hours in the following courses:

Applied Music in approved courses numbered above 100 . . . . 8 hrs.
Theory of Music, MSC. 101, 102, 201, 202 . . . . . 12 hrs.
Survey of Music History, MSC. 412, 413 . . . . . 4 hrs.

Upon completion of the above courses the student must select an area of concentration —i.e., Applied Music, Theory of Music, Musicology, or Secondary Music Education and earn eight credits in that concentration. (These required eight credits are in addition to those listed above and must be specifically approved for each student.) The student must also participate in ensemble music groups for not less than four semesters.

Students entering the University electing to major in music in this program will be required to take placement examinations in the following areas: (a) The chosen field of concentration, (b) Theory of Music, (c) Musicology, (d) Piano. However, before the student may be admitted to a Departmental Major Program in Music in the College of Arts and Sciences (his junior year), he must pass a proficiency examination in Piano.

The student who selects music as a component of a Group Major must earn a total of twenty-four hours of credit in music. In this twenty-four hours no more than twelve hours of applied or ensemble music may be counted.

Students interested in majoring in music should consult Professor Arnold E. Wirtala as soon as possible in their college program.

Art: The program for students in the College of Arts and Sciences who are planning a departmental major in Art should include a total of not less than 24 and not more than 32 semester hours. In the following courses the student should choose not less than 12 and not more than 21 semester hours: Art 121, Art 123, Art 124, Art 222,

Art 225, Art 226, Art 290. The remaining hours can be taken in the following areas of specialization at the 300 and 400 level: Crafts, Commercial Art, Costume Design, Drawing and Painting, Design and History of Art. The student who selects Art as a component of a group major should choose not less than 6 and not more than 9 semester hours from the following: Art 121, Art 123, Art 124, Art 222, Art 225, Art 226 or Art 290. The remaining courses can be taken in the following areas of specialization at the 300 and 400 level: Crafts, Commercial Art, Costume Design, Drawing and Painting, Design and History of Art.

Students should consult Professor Eugene E. Grissom in planning a major program.

GROUP MAJOR IN SANITARY SCIENCE

The College of Arts and Sciences offers its regular Bachelor of Science degree with a group major in those subjects most important in preparing the student for base-level employment as a Sanitarian. All College requirements governing this degree apply except that the composition of courses for the major in Sanitary Science is the following:

The group major in Sanitary Science requires no less than fourteen, nor more than sixteen, semester courses from the list below. Required courses are indicated with an asterisk (*).

CY. 217-218 (or equivalent)	General Chemistry
CY. 331	Introductory Quantitative Analysis
CY. 362-363 (or equivalent)	Organic Chemistry
*CY. 315	Water Chemistry
*BCY. 305	Basic Introductory Bacteriology
*BCY. 306	Basic Bacteriology Laboratory
*BCY. 508	Pathogenic Microbiology
*BLY. 161-162 (or equivalent)	Biology Laboratory
*BLY. 516	Animal Parasitology
or	
*EY. 450	Public Health Entomology
*CL. 328	Water Supply Sanitation
*CL. 422	Public Health Engineering
*CL. 425	Sewage and Industrial Waste Treatment
CL. 427	Public Health Engineering Laboratory
EGR. 181	Engineering Drawing
DY. 211	Principles of Dairying

Recommended subsidiary courses include MS. 105, 106, PS. 201, 202, PCL. 202, ES. 203, and JM. 414. Recommended electives include SY. 201, PSY. 201, ES. 201, and SCH. 201. Students are referred to Dr. A. P. Black for advisement in this program.

CHAIR OF AMERICANISM

Through the generosity of the American Legion, Department of Florida, which has provided a fund of $40,00 for this purpose, supplemented by legislative appropriation, there is maintained a Professorship in the Department of History of the College of Arts and Sciences known as the "Chair of Americanism." This Chair was established to present courses and lectures on American ideals, American government, American institutions, and American citizenship.

The Professor of Americanism teaches courses in American History and promotes special programs on American ideals. Although the University requires all freshmen to take an eight credit, two semester course entitled, "American Institutions," a number of additional courses in American History are offered as electives. The central theme in all American History courses is the struggle of the people of the United States for a more perfect democracy.

Part of the income from the endowment of the Chair of Americanism is used to

bring outstanding Americans to the University of Florida for a series of addresses on the theme of American traditions. Many of the lectures are published and distributed as a part of the Americanism program of the University.

PLACEMENT SERVICE

The facilities of the University Placement Service are available to students in the College of Arts and Sciences. Students wishing to make use of this service should report directly to Mr. M. E. Mayberry, University Placement Officer, Building H, South End.

ADMISSION TO GRADUATE STUDY

The general section of this catalog dealing with admissions describes certain minimum requirements for admission of graduate students to the University. Additional details for admission are given in the section of the catalog concerned with the Graduate Division.

Students wishing to be admitted to graduate work in any Department of the College of Arts and Sciences must meet these requirements and must also: (1) have earned a 3.0 (B) average in all work attempted in the proposed major field as well as having earned the required 3.0 (B) average for all work done during the Junior and Senior years of the undergraduate program; (2) have made a satisfactory score on the Graduate Record Examination by averaging the aptitude portions of the G.R.E. alone or in conjunction with the advanced subject matter test in the major field; (3) have completed an amount and distribution of work in the proposed graduate major field which is satisfactory to the major department; and (4) have qualities condusive to successful study on a graduate level.

Students who do not meet the requirement for unqualified admission to the Graduate Program of the College of Arts and Sciences but who have the following minimum qualifications: (1) a 2.6 average in the last two years of undergraduate work (2) twelve hours in the major field, may apply for the planning of a trial program. If so accepted by the college the student will be registered as a 5th year Arts and Sciences major and will be given a program of about 15 semester hours involving advanced undergraduate courses and including not more than six semester hours of graduate courses. Upon completion of this program with no grade less than "B" the student will be given unqualified admission to the graduate school. Up to 12 hours of the trial program may be credited to his graduate record. This trial program will not be continued beyond the originally planned period.

THE COLLEGE OF BUSINESS ADMINISTRATION

GENERAL STATEMENT

The College of Business Administration of the University of Florida was organized in 1926-27 to meet the needs of Florida business. The divisions of the College are: Department of Accounting; Department of Business Organization and Operation; Department of Economics; Department of Real Estate; and Bureau of Economic and Business Research.

The purposes of the College of Business Administration are five in number: First, to provide students with the fundamentals of business; second, to prepare them to become business leaders and executives; third, to train them to serve as business technicians — accountants, economists, statisticians, sales and market specialists and research workers; fourth, to develop at least some students into prospective collegiate teachers; and fifth, to prosecute projects of research. As a part of a state-supported University, founded to train better citizens, the College also aims to give its students an appreciation of the social importance and responsibilities of businessmen.

The operations of business enterprises in recent years have become increasingly complex in character. They have ceased to be simple and localized; they have become intricate and highly involved — state-wide, nation-wide, world-wide. To manage business concerns successfully and profitably, broad training is necessary. The principles upon which the economic system functions, the forms of business units, the ramifications of production and of markets, the services of transportation and communication, the impact of taxation, the methods of financing — all require consideration. Those who expect to be business owners and managers or who desire to serve as business specialists must be provided with training in fundamentals — professional training in fundamentals.

The College of Business Administration is organized toward this end. It does not turn out finished businessmen — managers, executives and department heads. The breadth and complexity of everyday economic life make it increasingly difficult to gain a proper understanding of the basic principles of modern business by starting as a junior employee of a business firm and learning on the job. The College instructs its students in these fundamentals before they commence their business careers. While it supplies its graduates with some skills and gives them a basic understanding, it does not equip them to start at the top. They must start lower down — even at the bottom — and by actual contacts and experience rise to the top more quickly and more surely than they would be able to rise without such training. Business today demands intensive study. It requires not only experience but also scientific training.

SCHOLARSHIPS AND ASSISTANTSHIPS

Graduate assistantships and fellowships are available for students working toward the degree of Master of Business Administration, Master of Arts, and Doctor of Philosophy. Information about these assistantships may be obtained from the Chairman of the Committee on Graduate Offerings and Degrees.

Some thirty scholarships for students in Business Administration have been made available through the generosity of individuals, firms and associations interested in the various phases of business. Included are scholarships for students in Accounting, Insurance, Real Estate, Resort and Club Management, and Transportation. Full information on these will be found in the Scholarships section of the Catalog.

BUREAU OF ECONOMIC AND BUSINESS RESEARCH

There is established in the College of Business Administration a Bureau of Economic and Business Research. One of the major purposes of this Bureau is to carry out research undertakings designed to contribute to economic and business knowledge, with primary emphasis upon the economy of Florida and the Southeast. A second major aim looks to the future participation of the faculty members of the Bureau staff in the curriculum for graduate training offered by the College of Business Administration and in this way to provide opportunity for graduate students to engage in specific research projects. From time to time work may be undertaken permitting a similar opportunity to undergraduate students.

The Bureau publishes the results of its research undertakings as these are completed. It also issues a monthly publication, *Economic Leaflets.*

The Bureau is a member of the Associated University Bureaus of Economic and Business Research.

MEMBERSHIP IN NATIONAL AND REGIONAL ASSOCIATIONS

The College of Business Administration is a member of the American Association of Collegiate Schools of Business and of the Southern Economic Association.

PLACEMENT OF GRADUATES

While the College of Business Administration does not obligate itself to secure positions for its graduates, it operates a placement service and does everything it can to assist students in securing employment after graduation.

BETA GAMMA SIGMA

Election to this national honorary society is based on scholarship and character. It fills the place in education for business that the society of Phi Beta Kappa holds in the field of classical education. Duly elected members have the right to wear the *insigne* of the society — the Beta Gamma Sigma gold key. For further information apply to the Office of the Dean.

PROFESSIONAL ORGANIZATIONS AND CLUBS

There are four professional fraternities who elect members from students in the College of Business Administration. These are Alpha Kappa Psi and Delta Sigma Pi in commerce and business, Beta Alpha Psi in accounting, and Phi Chi Theta for business women. Several clubs also give students with specialized interest an opportunity to participate in their activities. These clubs are The Real Estate Club, The Insurance Society, The Sales Club, The Finance Association, The Student Club Managers Association, and a student chapter of The Propellor Club. A student chapter of the Society for Advancement of Management elects its memberships both from this College and the College of Engineering.

MAXIMUM CREDIT LOADS OF STUDENTS

The curricula in Business Administration are planned for students to take 15 hours in each of their first two semesters of work and 18 hours in each of their last two semesters. Registration for more hours than these will be permitted for students whose grades are satisfactory but in no case can it exceed the general University regulations concerning maximum credit loads.

Of the 66 semester credit hours required for graduation, not more than six semester credit hours may be earned by correspondence or extension study. Such credit hours, furthermore, must be approved for each individual student in advance by the Committee on Undergraduate Courses and Curricula.

GRADUATION WITH HONORS

To graduate *With Honors,* a student must make at least 3.2 on all course work accepted for the degree as Upper Division credit and all work taken in the Upper Division. To graduate *With High Honors* a student must make at least a 3.6 on all course work accepted for the degree in the Upper Division and all work taken in the Upper Division. In calculating requirements for graduation *With Honors* or *With High Honors,* transfer credits will be excluded but the student must have at least 45 semester hours taken in the Upper Division in this College.

UNDERGRADUATE DEGREE AND CURRICULA

The College of Business Administration offers one undergraduate degree: The Bachelor of Science in Business Administration. To secure this degree students must complete one of the programs of course groupings in the curriculum in Business Administration.

GRADUATE DEGREES AND ADMISSION TO GRADUATE WORK

Courses are offered in the College of Business Administration leading to the degree of Master of Business Administration, Master of Arts, and Doctor of Philosophy. For requirements for these degrees consult the section of this *Catalog* entitled The Graduate School. This section also states the conditions for admission to the Graduate School. Students who do not meet the requirements for unqualified admission to the Graduate School as there stated may apply for the planning of a trial program. If so accepted by the college the student will be registered as a fifth year student and will be give a program of about 15 semester hours involving advanced undergraduate courses and including not more than six semester hours of graduate work. Upon completion of this program with an average grade of "B" and a satisfactory achievement in the Graduate Record Examination, the student will be considered for unqualified admission to the Graduate School. Up to 12 hours of the trial program may be credited to his graduate record. The trial program will not be continued beyond the original planned period.

ADMISSION REQUIREMENTS

Students will be admitted to the College of Business Administration who have fulfilled the following requirements:

1. Completion of the requirements of the University College with an academic average of 2.0 or higher. This must include:

   (a) All required University College courses (C-1, C-2, C-3, C-41, C-42, C-5 and C-6 or satisfactory substitutes therefor), with a passing grade on each.

   (b) All required foundation courses, with a passing grade on each as follows:

ES. 201-202 —Basic Economics
ATG. 211-212 —Elementary Accounting
ES. 203 —Elementary Statistics
MS. 208 —Business Mathematics

2. A Committee on Admissions will consider requests for admission from students who do not meet the conditions stated above. Admission without the required average, however, will be approved only in exceptional cases.

CURRICULUM IN BUSINESS ADMINISTRATION

The Curriculum in Business Administration is divided into sixteen programs of study. Each student is required to select and complete one of these groups or programs. Of sixty-six semester hours required for graduation, from forty-five to fifty-one hours are prescribed. Where adequate cause therefor is shown, students may, by petition, be allowed to substitute other courses in economics and business administration for these prescribed courses. The remaining hours in each group are approved electives. Of these hours, twelve may consist of courses offered outside the College of Business Administration, including six semester hours in advanced military science.

I. ACCOUNTING

This curriculum is designed to train students in the basic elements of accounting and to provide them with general preparation in the three major fields of accounting: public, private, and governmental. James S. Lanham, Advisor.

Junior Year	Credits
ATG. 311.—Accounting Principles	3
ATG. 312.—Accounting Principles	3
ATG. 313.—Cost Accounting	3
BS. 271.—Principles of Management	3
BS. 401.—Business Law	3
ES. 321.—Money and Banking	3
ES. 327.—Public Finance	3
Accounting Elective*	3
Approved Electives	6
	30

Senior Year	Credits
ATG. 411.—Advanced Accounting	3
ATG. 412.—Principles of Auditing or ATG. 416.—Internal Auditing	3
BS. 402.—Business Law	3
BS. 427.—Corporation Finance	3
ES. 407.—Economic Principles and Problems	3
ES. 408.—Economic Principles and Problems	3
Accounting Electives**	6
Approved Electives	12
	36

*Accounting Electives, usually taken during the Junior Year but may be taken during the Senior Year: ATG. 413—Advanced Accounting Systems; ATG. 417.—Governmental Accounting (required for C.P.A. Examination in Florida); ATG. 419.—Controllership Accounting.

**Accounting Electives, usually taken during the Senior Year: ATG. 414.—Income Tax Accounting; ATG. 415.—Corporate Accounting Problems; ATG. 418.—Advanced Accounting; ATG. 593.—Advanced Cost Accounting.

The choice of electives depends upon the student's interest in the public, private, or governmental accounting fields and should be determined in consultation with the accounting advisor.

II. BANKING AND FINANCE

This curriculum is designed for those students who plan to go into commercial or investment banking or into other types of financial institutions. John B. McFerrin, Advisor.

Junior Year	Credits
BS. 231.—Principles of Marketing	3
BS. 271.—Principles of Management	3
BS. 401.—Business Law	3
BS. 402.—Business Law	3
BS. 427.—Corporation Finance	3
ES. 321.—Money and Banking	3
ES. 327.—Public Finance	3
ES. 351.—Elements of Transportation or ES. 454.—Principles of Public Utility Economics	3
Approved Electives	6
	30

Senior Year	Credits
BS. 420.—Management of Bank Funds	3
BS. 422.—Investments	3
BS. 424.—Investment Analysis	3
BS. 428.—Corporation Finance	3
ES. 372.—Labor Problems or BS. 373.—Personnel Management	3
ES. 421.—Advanced Money and Banking	3
ES. 429.—Introduction to Business Cycles	3
Approved Electives	15
	36

III. REAL ESTATE

This curriculum is designed to prepare students to enter a general real estate business or any one of its special branches. These special branches are appraising, finance, management, and brokerage, James E. Chace, Advisor.

Junior Year	Credits
BS. 260.—Fundamentals of Insurance	3
BS. 271.—Principles of Management	3
BS. 401.—Business Law	3
ES. 321.—Money and Banking	3
ES. 327.—Public Finance	3
RE. 291.—Real Estate Fundamentals	3
RE. 390.—Property Valuation	3
RE. 392.—Real Estate Brokerage	3
RE. 393.—Urban Land Utilization	3
Approved Electives***	3
	30

Senior Year	Credits
RE. 391.—Property Management	3
RE. 490.—Real Estate Appraisal	3
RE. 492.—Real Estate Finance	3
RE. 493.—Real Estate Law	3
BS. Electives*	3
ES. Electives**	6
Approved Electives***	15
	36

*The BS. Elective must be selected from the following: BS. 231.—Principles of Marketing; BS. 373.—Personnel Management; BS. 402—Business Law; BS. 427.—Corporation Finance; BS. 471.—Principles of Organization; BS. 479.—Business Policies.

**The ES. Electives must be selected from the following and must include at least one of the last four named 400 courses: ES. 347.—Principles of Foreign Trade; ES. 351.—Elements of Transportation; ES. 372.—Labor Problems; ES. 407.—Economic Principles and Problems; ES. 408—Economic Principles and Problems; ES. 409.—Comparative Economic Systems; ES. 429.—Introduction to Business Cycles.

***Suggested Electives: BS. 233.—Salesmanship; BS. 365.—Fire Insurance; BS. 366.—Casualty Insurance; BS. 433.—Advertising; BS. 482.—Corporate Suretyship; ES. 382.—Principles of Resource Utilization; RE. 295.—Housing and Home Ownership; RE. 491.—Principles and Problems of City Planning; GPY. 305.—Geography of Florida; SY. 326.—Urban Sociology.

IV. MARKETING

This curriculum is designed to prepare students for careers in the distributive industries, for market research activities, and for graduate work in marketing. A student interested in some particular area of marketing, such as sales, retailing, or advertising, should select his marketing electives from courses offered in his area of interest. Advisors: Each student should designate as his advisor some member of the marketing staff teaching courses in his area of special interest. This may be done when the student first enrolls in the College of Business Administration. Students not selecting an advisor will be assigned to some full-time staff member in marketing for advice.

Junior Year	Credits
BS. 231.—Principles of Marketing	3
BS. 233.—Salesmanship	3
BS. 271.—Principles of Management	3
BS. 401.—Business Law	3
BS. 402.—Business Law	3
BS. 433.—Advertising	3
BS. 437.—Retailing	3
ES. 321.—Money and Banking	3
ES. 327.—Public Finance	3
Approved Elective	3
	30

Senior Year	Credits
BS. 438.—Sales and Market Analysis	3
BS. 439.—Merchandising	3
Marketing and Related Electives*	6
BS. Elective**	3
ES. Electives***	6
Approved Electives	15
	36

*Six credits must be selected from the following marketing and related courses: BS. 334—Sales Management; BS. 336.—Credits and Collections; BS. 430.—Wholesaling; BS. 434.—Advertising Problems; BS. 450.—Small Retail Store Management; BS. 459.—Field Work in Marketing; PSY. 206.—Psychology Applied to Business and Industry; JM. 510.—Newspaper Advertising Copy; EH. 255.—Business Communications.

**The BS. Elective must be selected from the following courses: BS. 260.—Fundamentals of Insurance; BS. 373.—Personnel Management; BS. 427.—Corporation Finance; BS. 471.—Principles of Organization; BS. 479.—Business Policies; and RE. 291.—Real Estate Fundamentals.

***The ES. Electives must be selected from the following and must include at least one of the last four named 400 courses: ES. 347.—Principles of Foreign Trade; ES. 351—Elements of Transportation or ES. 454.—Principles of Public Utility Economics; ES 372.—Labor Problems; ES. 407.—Economic Principles and Problems; ES. 408.—Economic Principles and Problems; ES. 409.—Comparative Economic Systems; and ES. 429.—Introduction to Business Cycles.

V. TRANSPORTATION AND PUBLIC UTILITIES

This curriculum is designed to provide a general understanding of the economic and certain practical aspects of the public service or closely regulated industries. The curriculum supplies a background for those students who wish to pursue research in this field or who anticipate employment therein. Merrill J. Roberts, Advisor.

Junior Year	Credits
BS. 271.—Principles of Management	3
BS. 401.—Business Law	3
BS. 427.—Corporation Finance	3
ES. 321.—Money and Banking	3
ES. 327.—Public Finance	3
ES. 351.—Elements of Transportation	3
ES. 372.—Labor Problems	3
ES. 453.—Transport Regulation	3
Approved Electives	6
	30

Senior Year	Credits
*BS. 444.—Ocean Transportation	3
BS. 451.—Traffic Management: Rates and Rate Making	3
BS. 452.—Traffic Management: Service and Service Regulations	3
*BS. 457.—Air Transportation	3
ES. 407.—Economic Principles and Problems	3
ES. 408.—Economic Principles and Problems	3
ES. 454.—Principles of Public Utility Economics	3
*ES. 458.—Highway Transportation	3
**BS. Elective	3
Approved Electives	12
	36

*Two of these three courses required.

**The B.S. Elective must be selected from the following: BS. 231.—Principles of Marketing; BS. 260.—Fundamentals of Insurance; BS. 373.—Personnel Management; BS. 471.—Principles of Organization; BS. 479.—Business Policies; and RE. 291.—Real Estate Fundamentals.

VI. PUBLIC FINANCE AND TAXATION

This curriculum is designed to train students who are going into the fiscal administration of government as well as background for work with other public agencies and the law. Clement H. Donovan, Advisor.

Junior Year	Credits
BS. 271.—Principles of Management	3
ES. 321.—Money and Banking	3
ES. 327.—Public Finance	3
ES. 421.—Advanced Money and Banking	3
ES. 478.—Problems in State and Local Finance	3
PCL. 201.—American Federal Government	3
PCL. 202.—American State and Local Government	3
*BS. Elective	3
Approved Electives	6
	30

Senior Year	Credits
BS. 401.—Business Law	3
ES. 351.—Elements of Transportation	3
ES. 404.—Government Control of Business	3
ES. 407.—Economic Principles and Problems	3
ES. 408.—Economic Principles and Problems	3
ES. 429.—Introduction to Business Cycles	3
ES. 477.—Problems in Federal Finance	3
*BS. Elective	3
Approved Electives	12
	36

*The BS. Electives must be selected from the following: BS. 231.—Principles of Marketing; BS. 260.—Fundamentals of Insurance; BS. 373.—Personnel Management; BS. 402.—Business Law; BS. 427.—Corporation Finance; BS. 471.—Principles of Organization; BS. 479.—Business Policies; and RE. 291.—Real Estate Fundamentals.

VII. FOREIGN TRADE

This curriculum is designed to provide students with an overall view of international trade in its geographic, financial, social and political aspects. It offers courses looking toward employment in exporting and importing. Murray W. Shields, Advisor.

Junior Year	Credits
BS. 231.—Principles of Marketing	3
BS. 271.—Principles of Management	3
BS. 444.—Ocean Transportation	3
ES. 321.—Money and Banking	3
ES. 327.—Public Finance	3
ES. 347.—Principles of Foreign Trade	3
ES. 351.—Elements of Transportation	3
GPY. 481.—Geography of the United States and Canada	3
Approved Electives	6
	30

Senior Year	Credits
BS. 401.—Business Law	3
BS. 402.—Business Law	3
BS. 448.—Foreign Trade Technique	3
ES. 407.—Economic Principles and Problems	3
ES. 408.—Economic Principles and Problems	3
ES. 449.—International Finance: Foreign Exchange	3
ES. 485.—International Economic Relations	3
*GPY. Elective	3
Approved Electives	12
	36

*The GPY. Elective must be selected from the following: GPY. 485.—Geography of South America; GPY. 486.—Geography of Caribbean America; GPY. 586.—Economic Geography of the Far East and GPY. 587.—Economic Geography of Europe.

VIII. LABOR ECONOMICS

This curriculum is designed to provide students with an understanding of the place and problems of labor in the economy. Charles W. Fristoe, Advisor.

Junior Year	Credits
BS. 271.—Principles of Management	3
BS. 373.—Personnel Management	3
ES. 321.—Money and Banking	3
ES. 327.—Public Finance	3
ES. 372.—Labor Problems	3
ES. 411.—Development of Modern Western Economy	3
PSY. 206.—Psychology Applied to Business and Industry	3
SY. 202.—Problems of American Society	3
Approved Electives	6
	30

Senior Year	Credits
BS. 401.—Business Law	3
BS 463.—Social Insurance	3
BS. 472.—Collective Bargaining	3
ES. 407.—Economic Principles and Problems	3
ES. 409.—Comparative Economic Systems	3
ES. 475.—Wage Theory and Practice	3
ES. 476.—Government in Relation to Labor	3
*BS. Elective	3
Approved Electives	12
	36

*The BS. Elective must be selected from the following: BS. 231.—Principles of Marketing; BS. 260.—Fundamentals of Insurance; BS. 402.—Business Law; BS. 427.—Corporation Finance; BS. 471.—Principles of Organization; BS. 479.—Business Policies; and RE. 291.—Real Estate Fundamentals.

IX. BUSINESS STATISTICS

This curriculum is designed primarily to prepare students for professional work in either government or private business. Students who complete the curriculum should be able to qualify for the rank of junior statistician immediately upon graduation and for the rank of senior statistician as soon thereafter as sufficient practical experience can be acquired. Montgomery D. Anderson, Advisor.

Junior Year	Credits
BS. 271.—Principles of Management	3
BS. 401.—Business Law	3
BS. 438.—Sales and Market Analysis	3
ES. 321.—Money and Banking	3
ES. 327.—Public Finance	3
ES. 366.—Economic Statistics	3
MS. 309.—Essential Mathematics for Applied Statistics	3
Approved Electives	9
	30

Senior Year	Credits
BS. 464.—Statistical Controls for Management	3
ES. 369.—Sample Surveys	3
ES. 429.—Introduction to Business Cycles	3
ES. 469.—Business Cycles and Forecasting	3
***SY. 550.—Population and Public Affairs	3
*BS. Electives	6
**ES. Elective	3
Approved Electives	12
	36

*The BS. Electives must be selected from the following: BS. 231.—Principles of Marketing; BS. 260.—Fundamentals of Insurance; BS. 373.—Personnel Management; BS. 402.—Business Law; BS. 427.—Corporation Finance; BS. 471.—Principles of Organization; BS. 479.—Business Policies; and RE. 291.—Real Estate Fundamentals.

**The ES. Elective must be selected from the following: ES. 347.—Principles of Foreign Trade; ES. 351.—Elements of Transportation; ES. 372.—Labor Problems; ES. 407.—Economic Principles and Problems; ES. 408.—Economic Principles and Problems; ES. 409.—Comparative Economic Systems.

***The prerequisites stated for this course are waived for students in this curriculum because of their economics background.

X. ECONOMICS

This curriculum is designed to provide students with a basic core group of courses in Economics, while, at the same time, enabling them to select their electives from among the Business Administration courses. Clement H. Donovan, Advisor.

Junior Year	Credits
BS. 271.—Principles of Management	3
ES. 321.—Money and Banking	3
ES. 327.—Public Finance	3
ES. 347.—Principles of Foreign Trade	3
ES. 351.—Elements of Transportation	3
ES. 372.—Labor Problems	3
ES. 410.—Development of Modern Western Economy	3
ES. 411.—Development of Modern Western Economy	3
Approved Electives	6
	30

Senior Year	Credits
BS. 401.—Business Law	3
BS. 427.—Corporation Finance	3
ES. 366.—Economic Statistics	3
ES. 404.—Government Control of Business	3
ES. 407.—Economic Principles and Problems	3
ES. 408.—Economic Principles and Problems	3
ES. 429.—Introduction to Business Cycles	3
*BS. Elective	3
Approved Electives	12
	36

*The BS. Elective must be selected from the following: BS. 231.—Principles of Marketing; BS. 260.—Fundamentals of Insurance; BS. 373.—Personnel Management; BS. 402.—Business Law; BS. 471.—Principles of Organization; BS. 479.—Business Policies; and RE. 291.—Real Estate Fundamentals.

XI. THE ECONOMICS OF INTER-AMERICAN TRADE

This area study curriculum is designed to acquaint students with inter-American business and cultural relationships and to provide them with foundations for work in trade with Latin-American countries. Robert W. Bradbury, Advisor.

Junior Year	Credits
BS. 271.—Principles of Management	3
ES. 296.—Industry and Trade of Latin America	3
ES. 321.—Money and Banking	3
ES. 327.—Public Finance	3
**GPY. 485.—Geography of South America	3
HY. 372.—Modern Latin-American History	3
****BS. Elective	3
*Spanish or Portuguese	6
***Approved Electives	3
	30

Senior Year	Credits
BS. 401.—Business Law	3
BS. 444.—Ocean Transportation	3
BS. 448.—Foreign Trade Technique	3
ES. 347.—Principles of Foreign Trade	3
ES. 407.—Economic Principles and Problems	3
ES. 408.—Economic Principles and Problems	3
ES. 441.—Financial Institutions and Fiscal Policies of Selected Latin-American Countries	3
****BS. Elective	3
*Spanish or Portuguese	6
***Approved Electives	6
	36

*Students registered in this curriculum may be excused from the Spanish or Portuguese requirements provided the Dean of the College of Business Administration recommends to the Foreign Language Department that the students be examined for a reading and speaking knowledge of Spanish or Portuguese and this examination is satisfactorily passed.

**Or GPY. 486.—Geography of Caribbean America.

***Of the approved electives no more than six semester hours may be taken outside the College of Business Administration.

****The BS. Electives must be selected from the following: BS. 231.—Principles of Marketing; BS. 260.—Fundamentals of Insurance; BS. 373.—Personnel Management; BS. 402.—Business Law; BS. 427.—Corporation Finance; BS. 471.—Principles of Organization; BS. 479.—Business Policies; and RE. 291.—Real Estate Fundamentals.

XII. EXECUTIVE SECRETARYSHIP***

This curriculum is designed to prepare students for secretarial positions.

Junior Year	Credits
**BEN. 81.—Introductory Typewriting	2
**BEN. 91.—Introductory Shorthand	3
**BEN. 181.—Advanced Typewriting	2
**BEN. 191.—Shorthand Dictation	3
BS. 271.—Principles of Management	3
BS. 373.—Personnel Management	3
BS. 401.—Business Law	3
BS. 402.—Business Law	3
ES. 321.—Money and Banking	3
ES. 327.—Public Finance	3
Approved Electives	6
	34

Senior Year	Credits
ATG. 214.—Federal Income Taxes for Individuals	3
BEN. 351.—Office Practice Techniques or	
BEN. 352.—Office Machine Techniques	2
BS. 374.—Office Management	3
EH. 255.—Business Communications	3
EH. 356.—Report Writing	3
*ES. Electives	6
Approved Electives	12
	32

*The ES. Electives must be selected from the following and must include at least one of the last four named 400 courses: ES. 347.—Principles of Foreign Trade; ES. 351.—Elements of Transportation; ES. 372.—Labor Problems; ES. 407.—Economic Principles and Problems; ES. 408.—Economic Principles and Problems; ES. 409.—Comparative Economic Systems; and ES. 429.—Introduction to Business Cycles.

**These specific course requirements may be waived upon taking an examination demonstrating mastery of these skills. In such event, the elective hours in this curriculum will be increased by the number of hours of course requirements waived.

***Students in this curriculum may take their typing and shorthand in the Freshman and Sophomore years and postpone an equivalent number of required University College hours to be completed after admission to the Upper Division.

XIII. INSURANCE

This curriculum is designed to prepare students for a career in the field of insurance. It is so formulated that the student may give primary emphasis to either Life Insurance or Property Insurance in accordance with his interests by following Program A or B. William M. Howard, Advisor (Program A); Robert S. Cline, Advisor (Program B).

Program A — Life Insurance

Junior Year	Credits
BS. 260.—Fundamentals of Insurance	3
BS. 271.—Principles of Management	3
BS. 363.—Life Insurance: Elements	3
BS. 401.—Business Law	3
BS. 402.—Business Law	3
BS 462.—Life Insurance: Problems and Practices	3
ES. 321.—Money and Banking	3
ES. 327.—Public Finance	3
Approved Electives	6
	30

Senior Year	Credits
BS. 422.—Investments	3
BS. 427.—Corporation Finance	3
BS. 463.—Social Insurance	3
BS. 484.—Legal Aspects of Insurance	3
BS. 486.—Life Insurance in Relation to Trusts and Estates	3
BS. 487.—Agency Management	3
*ES. Electives	6
Approved Electives	12
	36

*The ES. Electives must be selected from the following and must include at least one of the last four named 400 courses: ES. 347.—Principles of Foreign Trade; ES. 351.—Elements of Transportation or ES. 454.—Principles of Public Utility Economics; ES. 372.—Labor Problems; ES. 407.—Economic Principles and Problems; ES. 408.—Economic Principles and Problems; ES. 409.—Comparative Economic Systems; and ES. 429.—Introduction to Business Cycles.

Program B — Property Insurance

Junior Year	Credits
BS. 260.—Fundamentals of Insurance	3
BS. 271.—Principles of Management	3
BS. 365.—Fire Insurance	3
BS. 401.—Business Law	3
BS. 402.—Business Law	3
BS. 481.—Ocean and Inland Marine Insurance	3
ES. 321.—Money and Banking	3
ES. 327.—Public Finance	3
Approved Electives	6
	30

Senior Year	Credits
BS. 363.—Life Insurance: Elements	3
BS. 366.—Casualty Insurance	3
BS. 427.—Corporation Finance	3
BS. 482.—Corporate Suretyship	3
BS. 484.—Legal Aspects of Insurance	3
BS. 487.—Agency Management	3
*ES. Electives	6
Approved Electives	12
	36

*The ES. Electives must be selected from the following and must include at least one of the last four named 400 courses: ES. 347.—Principles of Foreign Trade; ES. 351.—Elements of Transportation or ES. 454.—Principles of Public Utility Economics; ES. 372.—Labor Problems; ES. 407.—Economic Principles and Problems; ES. 408.—Economic Principles and Problems; ES. 409.—Comparative Economic Systems; and ES. 429.—Introduction to Business Cycles.

XIV. GENERAL BUSINESS

This curriculum is designed to provide a series of courses for those students who have not yet determined the particular area of business in which they wish to specialize. It offers courses which give a contact with the several major fields of business and which should be helpful to those who enter any field of business.

Junior Year	Credits
BS. 231.—Principles of Marketing	3
BS. 260.—Fundamentals of Insurance	3
BS. 271.—Principles of Management	3
BS. 401.—Business Law	3
ES. 321.—Money and Banking	3
ES. 327.—Public Finance	3
ES. 351.—Elements of Transportation	3
RE. 291.—Real Estate Fundamentals	3
Approved Electives	6
	30

Senior Year	Credits
ATG. 214.—Federal Income Taxes for Individuals	3
BS. 233.—Salesmanship	3
BS. 373.—Personnel Management or BS. 372.—Labor Problems	3
BS. 422.—Investments	3
BS. 427.—Corporation Finance	3
BS. 479.—Business Policies	3
*ES. Electives	3
Approved Electives	15
	36

*The ES. Elective must be selected from the following: ES. 407.—Economic Principles and Problems; ES. 408.—Economic Principles and Problems; ES. 409.—Comparative Economic Systems; and ES. 429.—Introduction to Business Cycles.

XV. MANAGEMENT

This curriculum is designed for students interested in management and management problems with options for specialized interests in Industrial Management or Resort and Club Management.

Program A — Industrial Management

This program is designed for students interested in Industrial Management or in management problems in general. William M. Fox, Advisor.

Junior Year	Credits
ATG. 313.—Cost Accounting	3
ATG. 419.—Controllership Accounting	3
BS. 271.—Principles of Management	3
BS. 373.—Personnel Management	3
BS. 401.—Business Law	3
ES. 321.—Money and Banking	3
ES. 327.—Public Finance	3
ES. 372.—Labor Problems	3
Approved Electives	6
	30

Senior Year	Credits
BS. 427.—Corporation Finance	3
BS. 464.—Statistical Controls for Management	3
BS. 471.—Principles of Organization	3
BS. 474.—Purchasing	3
BS. 479.—Business Policies	3
IG. 321.—Work Simplification and Standardization	3
IG. 322.—Plant Development and Operation	3
*ES. Elective	3
Approved Electives	12
	36

*The ES. Elective must be selected from the following: ES. 407.—Economic Principles and Problems; ES. 408.—Economic Principles and Problems; ES. 409.—Comparative Economic Systems; ES. 429.—Introduction to Business Cycles.

Program B — Resort and Club Management

This program covers the fundamentals of training for management of resorts and private clubs, as country clubs, city clubs, yacht clubs, etc.

Junior Year	Credits
ATG. 313.—Cost Accounting	3
BS. 231.—Principles of Marketing	3
BS. 271.—Principles of Management	3
BS. 373.—Personnel Management	3
BS. 375.—Food Planning and Management	3
BS. 401.—Business Law	3
ES. 321.—Money and Banking	3
ES. 327.—Public Finance	3
Approved Electives	6
	30

Senior Year	Credits
ATG. 318.—Resort, Club and Hotel Accounting	3
BS. 474.—Purchasing	3
BS 475.—Resort and Club Management	3
BS. 479.—Business Policies	3
PHA. 324.—Social Recreation	3
PSY. 206.—Psychology Applied to Business and Industry	3
*ES. Electives	6
Approved Electives	12
	36

*The ES. Electives must be selected from the following and must include at least one of the last four named 400 courses: ES. 347.—Principles of Foreign Trade; ES. 351.—Principles of Transportation or ES. 454.—Principles of Public Utility Economics; ES. 372.—Labor Problems; ES. 407.—Economic Principles and Problems; ES. 408.—Economic Principles and Problems; ES. 409.—Comparative Economic Systems; ES. 429.—Introduction to Business Cycles.

Work Experience: Arrangements have been made with selected resorts and clubs to give on-the-job training in summer employment. Students in Resort and Club Management will be required to spend the summer between the junior and senior years in this on-the-job training, though it will carry no hours credit. Exceptions to this requirement can be made by the Dean on recommendation of the Advisor. Employment for on-the-job training in a resort or club other than one on the selected list must be approved in advance by the Advisor.

Students planning to enter this curriculum are urged to seek resort or club employment and on-the-job training during the summer between the sophomore and junior years. However, assistance in placement will be given only to those students for whom a recommendation is made by the Advisor for this curriculum.

XVI. INDUSTRIAL RELATIONS

This curriculum is design to provide students with an understanding of the application of personnel management to business and to provide them with a foundation for work in industrial relations. William M. Fox, Advisor.

Junior Year	Credits
BS. 271.—Principles of Management	3
BS. 373.—Personnel Management	3
BS. 401.—Business Law	3
ES. 321.—Money and Banking	3
ES. 327.—Public Finance	3
ES. 372.—Labor Problems	3
ES. 476.—Government in Relation to Labor	3
PSY. 206.—Psychology Applied to Business and Industry	3
Approved Electives	6
	30

Senior Year	Credits
BS. 231.—Principles of Marketing or	
BS. 427.—Corporation Finance	3
BS. 463.—Social Insurance	3
BS. 471.—Principles of Organization	3
BS. 472.—Collective Bargaining	3
BS. 473.—Personnel Problems	3
ES. 409.—Comparative Economic Systems	3
ES. 475.—Wage, Theory and Practice	3
IG. 321.—Work Simplification and Standardization	3
Approved Electives	12
	36

COLLEGE OF EDUCATION

GENERAL STATEMENT

The College of Education, a professional school, has for its purpose the preparation of qualified personnel for the public schools of Florida. More specifically, its purposes are to plan, organize, and conduct programs of teacher education; to furnish professional courses in education included in the curricula for students preparing to teach; to collaborate with other colleges of the University in matters pertinent to teacher education; to furnish advisory services for students concerning teacher education; to conduct experimental and research studies in education; and to collaborate with educational agencies, professional groups, school personnel, and others interested in the evaluation and improvement of educational opportunities, programs, and services.

REQUIREMENTS FOR ADMISSION

Students entering the College of Education from the University College will be expected (1) to present a certificate of graduation from that college, or to be recommended for admission to the Upper Division, (2) to have credit with an average of 2.0 or better in the specified pre-professional courses for the curriculum of their choice (see curricula below) and in their field of specialization, (3) to have maintained an average of 2.0 or better in all prior college work, and (4) to have the approval of the Committee on Admissions of the College of Education. Students must apply in person at the Undergraduate Counseling Office, P. K. Yonge 140, not later than the middle of the term preceding the one in which they expect to enroll in the College. This application is in addition to the usual application in the Office of the Registrar.

Students transferring into the College of Education directly from other institutions must present college credit equivalent to graduation from the University College, as determined by the Board of University Examiners, and have the approval of the Committee on Admissions of the College of Education. Information concerning materials to be submitted to the Committee on Admissions may be secured from the Undergraduate Counseling Office, Room 140, P. K. Yonge. Transfer and acceptance of credits from other institutions are handled through the Office of the Registrar.

COUNSELING AND PERSONNEL SERVICES

To assist students in their educational and vocational planning and to insure the induction of the best teachers into the schools of Florida, the College has provided guidance and personnel service.

The student is provided help in planning a sequence of courses which will give him the best training possible for a particular field of work and which will at the same time enable him to meet state certification requirements.

Counseling facilities include: (a) undergraduate counseling, (b) graduate counseling (Office of Graduate Studies in Education), and (c) the educational placement office.

DEGREES AND CURRICULA

The degrees Bachelor of Arts in Education and Bachelor of Science in Education are offered in the College of Education. The Bachelor of Science in Education degree is granted to students whose first area of specialization is in science, mathematics, agricultural education, business education, or industrial arts; other curricula lead to the Bachelor of Arts in Education degree. For either degree the student is required to

complete 124 semester credits with a general average of "C" or better. He must also complete College and certification requirements for a broad subject or field of specialization (ordinarily 30 or more credits) with a "C" average in the field.

I. ELEMENTARY EDUCATION

Students who plan to major in Elementary Education should pursue the following program:

UNIVERSITY COLLEGE

EDF. 245—Aspects of Human Growth and Development	3
EDF. 225—Children and Culture	3
*MSC. 161—Music for the Elementary Child	3
SCA. 253—Introduction to Art Education	3
**Electives	6

*Students must pass test in music skills or take MSC. 160 as prerequisite to MSC. 161.

**Students should consult counselor in the College of Education for electives in education courses.

COLLEGE OF EDUCATION

Junior and Senior Years

PHA. 361—The Elementary School Health Program	3
PHA. 373—Teaching Physical Education in the Elementary School	3
*GL. 301—Elementary School Science	3
*SCL. 301—Children's Social Studies	3
*EH. 491—Children's Literature	3
EDE. 300—Children and Learning	15
EDE. 405—The Practicum	15
*Electives	15

*Students should consult counselor for additional electives in the areas of English, science, and social studies, and for electives in professional education courses.

Students and counselors from the College of Education will together develop a program that will enable the student to meet satisfactorily requirements in the above curriculum. The student should report to the Undergradate Counseling Office, Yonge Building, for assignment to a counselor. Students transferring from another institution should consult a counselor in Elementary Education immediately upon their admission to the College of Education.

II. EDUCATION FOR THE EXCEPTIONAL CHILD

Florida's Minimum Foundation Program provides for the employment of teachers for children who will benefit from special instruction outside the regular classroom. The College of Education offers programs of preparation for those interested in teaching the slow learners and the orthopedically handicapped, and for persons interested in working in the area of speech correction and hearing.

Programs for the education of teachers of children with severe emotional disturbances, teachers of comprehensive classes and of administrators and supervisors of programs in exceptional child education contain many requirements which cannot be met in the usual programs for the bachelor's degree.

Students interested in work with exceptional children should be familiar with Florida State Department of Education certification requirements. They also must be assured in advance of a suitable experience in their internship program. The Undergraduate Counseling Office, P. K. Yonge building, offers assistance in working out such programs.

To register for this curriculum students should have completed, while in the

University College, the basic program outlined for prospective teachers of the exceptional child.

Junior Year

First Semester	Credits
SCL. 301.—Children's Social Studies	3
GL. 301.—Elementary School Science	3
SCA. 253.—Introduction to Art Education	3
EDP. 300.—Principles and Practices for Teaching Exceptional Children	3
Designated Electives	6
	18

Second Semester	Credits
PHA. 373.—Teaching Physical Education in the Elementary School	3
PSY. 312.—Psychology of Exceptional Children	3
PSY. 202.—Personality Development	3
Designated Electives	9
	18

Senior Year

First Semester	Credits
EDE. 300.—Children and Learning	15

Second Semester	Credits
EDE. 405.—The Practicum	15

Designated electives in respective areas:

Speech Correction and Hearing: PHA. 375; SCH. 317, 320, 410, 415, 518, 519, 522, 531.

Slow Learners: EDP. 500; EDF. 400; EDE. 570; IN. 330, 331, 430; PSY. 211, 410, 503, 504, 512; SCH. 317, 320, 518.

Orthopedically Handicapped: EDP. 503, 504; PHA. 261, 315, 375; SCH. 317, 320, 518.

III. SECONDARY EDUCATION

Students who plan to work in any area of the secondary program (except Agricultural Education) should pursue the following program:

University College

EDF. 225.—Children and Culture	3 hours
EDF. 245.—Human Growth and Development	3 hours

Junior Year

EDS. 305.—The Secondary School Today	3 hours
Approved Elective in Education	3 hours

Senior Year

EDS. 405.—Intern Teaching in the Secondary School	15 hours
Approved Elective in Education	3 hours

Three hours in the Human Adjustment area, other than C-41, are required. These electives may be taken in the University College or in the College of Education. The elective courses in Education in the Junior and Senior years must be approved in advance by the counselor and the head of the department.

Students in Secondary Education may specialize in the following areas:

Agriculture
Art
Business Education
Core
English
Health Education
Industrial Arts
Language Arts
Languages
Mathematics
Music
Physical Education
Science
Social Studies

Certification requirements may also be met in the following fields if chosen in addition to the first teaching field:

Driver Education
Health
Journalism
Library Service
Separate fields of Science
Separate fields of Social Studies
Speech

Each student shall plan with his assigned counselor a program to meet graduation and certification requirements in his area of concentration.

IV. VOCATIONAL AGRICULTURE

The curriculum in Agricultural Education is designed to prepare students to be teachers of vocational agriculture as provided for under the provisions of the Smith-

Hughes and George-Barden Acts. Since the teaching in such positions covers all phases of agriculture, the curriculum contains courses from each agricultural department.

Students desiring to register are advised to take the program of study recommended in the University College for Agricultural Education.

Junior Year

Course	First Semester	Credits
AG. 303.—	Farm Shop	3
FT. 230.—	Food Technology and Nutrition	3
FY. 313.—	Farm Forestry	3
AL. 309.—	General Animal Husbandry	3
EDF. 245.—	Human Growth and Development	3
EDV. 306.—	Vocational Education	3
		18

Course	Second Semester	Credits
AS. 306.—	Farm Management	3
AL. 314.—	Livestock Judging	2
AG. 306.—	Farm Machinery	3
EDS. 305.—	The Secondary School Today	3
EDV. 303.—	General Methods in Agriculture	3
Elective		2
		16

Senior Year

SLS. 301.—	Soils	3
EY. 203.—	Economic Entomology	3
OHE. 329.—	Landscape Gardening	3
VY. 401.—	Farm Sanitation	3
EDV. 409.—	Supervised Teaching in Agriculture	3
EDV. 411.—	Adult Education in Agriculture	2
		17

SLS. 302.—	Soil Fertility	3
FC. 341.—	Citrus Growing	3
AS. 308.—	Marketing	3
AG. 407.—	Farm Shop Power Equipment	3
EDV. 410.—	Supervised Teaching in Agriculture	3
EDV. 412.—	Course Organization in Vocational Agriculture	2
		17

V. BUSINESS EDUCATION

To register for this curriculum students should have completed the following courses while registered in the University College:

BEN. 81-181—Introductory and Advanced Typewriting
BEN. 91 —Introductory Shorthand
ES. 201-202—Basic Economics
EDF. 245 —Human Growth and Development
EDF. 225 —Children and Culture

Junior Year

Course	First Semester	Credits
ATG. 211.—	Elementary Accounting	3
BEN. 191.—	Shorthand Dictation	3
EH. 255.—	Business Communications	3
ES. 321.—	Money and Banking or	
BS. 322.—	Financial Institutions	3
Electives		3
		15

Course	Second Semester	Credits
ATG. 212.—	Elementary Accounting	3
BEN. 291.—	Shorthand Dictation and Transcription	3
BS 401.—	Business Law	3
EDS. 305.—	The Secondary School Today	3
Electives		3
		15

Senior Year

BEN. 561.—	Principles of Business Education	3
BS. 402.—	Business Law	3
RE. or BS.	Elective	3
Electives		6
		15

*EDS. 405.—	Intern Teaching in the Secondary School	15

*Students must have the approval of the department before registering for internship (EDS. 405) in business education.

VI. INDUSTRIAL ARTS

To register for this curriculum, it is desirable that the student complete the following courses while registered in the University College:

EDF. 225.—Children and Culture	3
EDF. 245.—Human Growth and Development	3
IN. 102.—Elementary Woodwork	3

Junior Year

Course	First Semester	Credits
IN. 110.—Elementary Mechanical Drawing		3
IN. 300.—Machine Woodwork		3
IN. 320.—General Bench Metals		3
IN. 330.—Elementary Handcrafts		3
Approved Electives		3
		15

Course	Second Semester	Credits
IN. 111.—Advanced Mechanical Drawing		3
IN. 340.—Laboratory Planning and Maintenance		3
IN. 400.—Design and Construction in Woods		3
IN. 420.—Machine Shop Practice		3
IN. 431.—Handcrafts Problems		3
		15

Senior Year

EDS. 305.—The Secondary School Today	3
IN. 341.—General Shop	3
IN. 410.—Architectural Drawing	3
Approved Electives	6
	15

EDS. 405.—Intern Teaching in the Secondary School	15
	15

ELEMENTARY AND SECONDARY INTERNSHIP

Requirements:

1. Admission to an upper division college for one full semester or summer session prior to the internship.
2. For students registered in other upper division colleges, fulfillment of all requirements for admission to the College of Education.
3. Completion of prescribed foundation courses and of the following professional and specialization requirements:

   Elementary:

   EDE. 300, MSC. 161, SCA. 253, GL. 301*, PHA. 361 and 373, SCL. 301*, EH. 491*.

   *Consult counselor in the College of Education for additional electives in the areas of English, science, and social studies and in professional education.

   Secondary:

   EDS. 305 and at least two-thirds of the course work, with a "C" or better average, in the teaching area in which the internship is to be taken; and consent of the Secondary Education Department and of the student's College of Education counselor.*

Procedures:

1. Students apply for intern teaching in either Elementary or Secondary Education in the Undergraduate Counseling Office, YON 140. The application must be received by October 1 preceding a spring internship and by March 1 preceding a fall internship.
2. Students have the responsibility for making arrangements to live in the community where internship is to be done and to assume living expenses of $100 to $125 in addition to regular on-campus living expenses.

*No course in the professional sequence may be taken by correspondence.

JUNIOR COLLEGE EDUCATION

It is possible for the student to arrange a program under the Secondary Education curriculum which will provide the basis for later graduate work leading to an advanced degree and certification for teaching in the public junior colleges of Florida. Courses which the student takes in his First Area of Concentration must include the necessary foundation for satisfactorily pursuing a minimum of twelve semester hours of graduate level work in the field to be taught. Professional study at the graduate level will be arranged to meet individual needs and will include selected courses in Junior College Education. Prospective junior college teachers are invited to discuss their plans with the head of the Secondary Education Department.

GRADUATION WITH HONORS AND HIGH HONORS

To graduate from the College of Education with honors or high honors the student will be required to earn on all college work an academic average of 3.2 for honors and an average of 3.5 for high honors. He must have earned at least 60 credits, with the appropriate average, at the University of Florida.

TEACHERS' CERTIFICATES

Graduates of the College of Education are granted certificates by the State Department of Education without further examination provided that during their college careers they have complied with the regulations of the State Board of Education covering the certification of teachers. These regulations are fully described in a bulletin on the certification of teachers, published by the State Department of Education in Tallahassee. It is imperative that students who expect to be certified familiarize themselves with these regulations. In general, they require that an applicant for certification have a background of general preparation amounting to 45 semester hours with at least 6 hours in each of the following groups : The Arts of Communication, Human Adjustment (Health, Physical Education, Psychology, Religion, etc.), Biological and Physical Sciences or Mathematics, the Social Studies, and Humanities and Applied Arts; that he shall have taken at least twenty semester hours in education; that he shall have specialized in the subjects to be entered on the face of the certificate; and that he shall have met certain other requirements more fully described in the latest bulletin on the certification of teachers. Application for the certificate should be made immediately after graduation and should be addressed to the State Department of Education, Capitol Building, Tallahassee, Florida. Application blanks and further information concerning certification may be obtained from the various counseling offices in the College.

GRADUATE EDUCATION

Types to degrees offered and admission requirements for the graduate program are described under the section of the Catalog devoted to The Graduate Division.

FIELDS OF SPECIALIZATION

Graduate students select a field of specialization. Each student's program of study includes some courses essential to the development of his desired specialization, and others intended to provide a general understanding of the entire field of education and the background necessary to the area of specialization.

Among the areas of specialization commonly selected are:

Administration
Agricultural Education
Business Education
Curriculum and Instruction
Early Childhood Education
Elementary Education
Foundations of Education
Guidance and Counseling
Industrial Arts Education
Junior College Education
Language Arts Education
Mathematics Education
Science Education
Secondary Education
Social Studies Education
Supervision
Teacher Education
Teaching Exceptional Children

It is often advisable for the graduate student to plan his program of study so that his work will not only qualify him for an advanced degree but will also enable him to secure specific certification in one of the fields in which the Florida State Department of Education requires certification before the individual can accept a position in the field. For example, it is necessary for a person working in the field of education to be certified in administration and supervision if he wishes to secure a principalship or a supervisory position. In order to secure such certification the candidate must complete studies in a number of fields which are specified by the State Department of Education.

COUNSELING SERVICES FOR GRADUATE STUDENTS

Graduate students in Education are assisted in program planning by the Office of Graduate Studies in Education. It is the function of this office to induct new graduate students and to provide them with needed information and to recommend counselors and committee appointments.

The Office of Graduate Studies in Education confers with each student with reference to his choice of a degree program and his plans for meeting state certification requirements at the graduate level, and assists the student in evaluating his past work and in ascertaining his present needs.

Counseling activities are initiated in the Office of Graduate Studies, but the major responsibility for planning with the student is assigned to the faculty member appointed to serve as the student's personal adviser. This faculty member represents the field of the graduate student's principal specialization or interest.

EDUCATIONAL PLACEMENT OFFICE

The Educational Placement Office is a service agency for both former students of the University and educational administrators. Up-to-date records are kept on registrants who are available for positions. Information is also available concerning opportunities in education at all levels and in related fields. Services of the office are free of charge; persons who wish to avail themselves of these services should communicate with the Educational Placement Office, 140 P. K. Yonge.

THE P. K. YONGE LABORATORY SCHOOL

The program of the School from the kindergarten through the twelfth grade is designed to serve as a guide and example of effective school practices in order to lead the State toward improving total school programs. Pre-service teachers study principles and practices in the School and make plans to adapt these practices to their future teaching situations. By studying the program of the School, in-service teachers develop improved practices. The School serves as a source of research and as a medium for the advancement of the findings of research. Graduate students utilize the School program for learning and for adding to existing educational theory and practice.

EDUCATIONAL RESEARCH

In order to stimulate a greater interest in educational research, each department in the College of Education has assumed responsibility for conducting research activities. From time to time department heads release staff members from teaching duties in order to provide time for research. Effort is made to conduct investigations which grow out of needs of the public school systems of the state. Policies governing research are developed by the research committee of the College.

PUBLIC SCHOOL SERVICES

The College of Education receives many requests for assistance from local, county, state, and national agencies. These have, over a period of time, led to the establishment of the following school services: (1) graduate and undergraduate class centers directed by the General Extension Division in many communities, (2) building surveys requested and financed by local boards of education, (3) Superintendents' Conference and Short Course series conducted as a year-round in-service training program, (4) work conferences for professional groups, (5) consultative services on local problems and planning furnished without fee to school personnel throughout the State by College staff members, (6) development and distribution of significant educational materials, (7) community and county workshop programs for in-service teacher education, and (8) whole-school study programs based on approved problem.

OFF-CAMPUS INSTRUCTION

The Department of Off-Campus Instruction is organized to plan and direct correspondence study; to assist in-service teaching personnel through organizing and conducting extension classes, workshops, and schoolwide study programs; and to plan for adult education work where college credit is desired. The Department plans for these services with other departments within the College of Education, and with the General Extension Division.

ASSISTANTSHIPS, SCHOLARSHIPS AND LOANS

General Scholarships for Preparation of Teachers (formerly Lewis House, and Senatorial), the A. R. Mead Scholarship Fund, the Kappa Delta Pi Loan Fund and the Kate V. Wofford Scholarship Fund are sources of funds for prospective teachers. Graduate and student assistantships and graduate fellowships are available for students in Education. Information may be obtained from the Graduate or Undergraduate Counselling offices, College of Education.

GRADUATE PROGRAM IN REHABILITATION COUNSELING

The degree of Master of Rehabilitation Counseling is an inter-disciplinary program established to give students professional and technical training designed to aid in the rehabilitation of physically and mentally handicapped persons. The diversity of activities performed by individuals in the various state, federal, and private agencies who bear the designation rehabilitation counselor necessitates a program that is general in nature and diversified in character. The fundamental purpose of the program, therefore, is to present a systematic and integrated study of the basic knowledge and skills needed by the rehabilitation counselor.

The minimum course requirement is 36 semester hours, of which 18 hours represents required work in courses and practicum specifically designated as rehabilitation courses. An additional minimum of 18 hours is selected from designated courses; i.e., 6 hours in each of the following areas: (1) Testing and Measurement, (2) Personality Development, and (3) Counseling. The selection of the 6 hours in each of the three areas is made on the basis of meeting the individual needs of the student and subject to the approval of a supervisory committee. Students who have previous education in one or more of these areas will be permitted to substitute other appropriate courses. Those who lack previous educational background in these areas will be required to take additional work before undertaking this program. At least 50 per cent of the minimum course requirements shall be from courses numbered 600 and above. The remainder may be at the 300, 400 and 500 levels. A thesis is not required. A reading knowledge of a foreign language is not required.

Supervisory Committee.—A committee of five members of the faculty representing the College of Education, College of Medicine, Department of Psychology, Department of Sociology, with a professor in Rehabilitation Counseling serving as chairman, and the Dean of the Graduate School as an *ex officio* member, will supervise the work of students registered in this program.

Admission to Candidacy.—Admission to candidacy will be recommended by the supervisory committee and approved by the College of Education and the Graduate School. The supervisory committee becomes the interdisciplinary body to determine the application of established policy to the individual student and to be responsible for the direction of the program. Admission to the work of this program is not a guarantee that the student will be admitted to candidacy for the degree.

Final Examination.—A thesis is not required for the degree Master of Rehabilitation Counseling but the candidate must pass a final examination at the close of his course work. This written and/or oral examination will be administered by the supervisory committee and will be confined largely to the student's major field of study.

COLLEGE OF ENGINEERING

GENERAL STATEMENT

The prime purpose of the College of Engineering is to educate men for the engineering profession. In our highly technical civilization a technological training should prove of value wherever the graduate decides to serve, for it must be recognized that many graduates of engineering schools become leaders and executives in varied fields.

The engineer should have thorough knowledge of the fundamental physical sciences and mathematics. He should know enough practical economics to apply the physical sciences properly to man's needs. He should be able to express himself clearly both with the written and the spoken word. He should have enough information in his professional field of application and in allied fields to fulfill engineering engagements normally assigned the college graduate. His training should be thoroughly grounded in fundamentals so that he can continue to grow after leaving the college. His professional consciousness must be such that he becomes an able member of his profession. Above all, he must always discharge his responsibilities as a citizen.

The curriculums of the College of Engineering are planned with these objectives in mind. Whether the student plans to apply his engineering skill and knowledge to the fields of aeronautical, agricultural, chemical, civil, electrical, industrial, or mechanical engineering he will find that many courses, particularly those of the first two years, are common for all fields. Specialization occurs basically in the junior and senior years. Further specialization may be secured by selecting options in several of the major fields.

Recognizing the need for persons trained in the field of engineering with specialization in the field of agriculture, the College of Engineering in cooperation with the College of Agriculture offers work leading to the degree of Bachelor of Agricultural Engineering. Students registered for this program take work which will educate them in the application of engineering principles to the problems of agriculture. The demand for agricultural engineers in Florida should continue to increase with the industrialization of farms and groves.

The field of engineering has been thought of almost exclusively as a man's domain. In the past few years, however, increasing numbers of women have been entering this field and are taking their places in the profession on an equal footing with men. Women who are interested in an engineering career and who have aptitudes in mathematics and science are invited to confer with the Dean of the College with reference to choosing engineering as a profession.

The College of Engineering awards the following baccalaureate degrees:

Bachelor of Aeronautical Engineering
Bachelor of Agricultural Engineering
Bachelor of Chemical Engineering
Bachelor of Civil Engineering
Bachelor of Electrical Engineering
Bachelor of Industrial Engineering
Bachelor of Mechanical Engineering

The curriculums in all departments of the College of Engineering, with the exception of the new program leading to the degree Bachelor of Agricultural Engineering, have been accredited by the Engineers' Council for Professional Development. The College of Engineering has prepared an illustrated bulletin entitled "Engi-

neering Education at the University of Florida" describing the educational and research activities of the College. Prospective students may secure a copy of this bulletin without cost from the Office of the Dean of the College or from the Office of the Registrar of the University. A bulletin prepared by the Engineers' Council for Professional Development entitled "Engineering—a Creative Profession" is particularly helpful to prospective students who wish detailed and accurate information concerning the general field of engineering and its several branches. Copies of this bulletin may be secured from the Office of the Dean of the College of Engineering.

Since the requirements for graduation in engineering exceed 140 semester hours and the difficulty of the work required is well recognized, THE CURRICULUMS FOR ALL DEPARTMENTS IN THE COLLEGE OF ENGINEERING HAVE BEEN ESTABLISHED ON A FIVE-YEAR BASIS. Quality of performance serves the engineering graduate far better than do quantity and mediocrity. These curriculums, however, are arranged to enable qualified students to accelerate their programs and to graduate in less time.

Subjects basic to engineering, and a few professional courses, are secured while the student is registered in the University College. In the Engineering College the student is given instruction in courses of a professional nature. The individual characteristics of the student are also given consideration and he is encouraged to utilize the time allowed for electives for productive activity in both technical and non-technical courses. He is also encouraged to develop further his initiative and imagination by devoting his spare time to the solution of special technical problems and projects. Library research and laboratory experience help the student mature in his understanding of the relationship of engineering practices to social and economic developments. The student is encouraged to coordinate his efforts in all fields of endeavor so that he will be well-grounded in the fundamentals of engineering practice and well equipped to take his place in his chosen profession.

Students with questions or problems are urged to confer at any time with the administrative staff and the teachers of the College of Engineering. This applies not only to upper division students but also to University College students. During each registration period, Engineering College counselors are available in the University College office to assist pre-engineering students in arranging their schedules.

Students expecting to transfer to the University of Florida as third-year students in the College of Engineering should make every attempt to complete the prerequisites listed under Admission Requirements. Failure to satisfy these requirements may seriously affect the student's progress.

A number of students receive financial assistance through part-time employment as student assistants in the various instructional and research laboratories of the College. Many others find employment elsewhere on the campus or in Gainesville.

There are also several loan funds available to engineering students. Details concerning these may be obtained from the Office of the Dean.

EQUIPMENT

All engineering students are required to procure the following items for their own personal use in addition to prescribed texts:

1) A slide rule
2) An engineering handbook
3) Drawing equipment
4) Dictionary

The student is urged to confer with the head of the appropriate department before

purchasing the items listed above. Through such a conference the student will be advised of the specific requirements in the department.

NUCLEAR ENGINEERING OPTION

In order to provide instruction for the new disicipline, Nuclear Engineering, the College of Engineering offers a technical elective option program in this field. This option may be pursued by any junior in the College of Engineering upon the recommendation of his department head. Other University students may be admitted to the option by the recommendation of their department heads and the Dean of the College of Engineering. Courses taken for this option may be substituted for other technical elective requirements.

The option will consist of a series of courses totaling nine (9) credit hours. The courses offered are as follows:

PS. 317.—Nuclear Physics	3
NR. 400.—Introduction to Nuclear Engineering	3
ML. 510.—Nuclear Power Reactors. Primarily for ME students Primarily for IE and ME students	3
EL. 520.—Nuclear Power Reactors, Primarily for EE students	3
CG. 530.—Nuclear Chemical Engineering, Primarily for ChE students	3

PS. 317 and ML. 400 are required as six (6) hours of the option and the remaining three (3) hours may be selected from ML. 510, EL. 520, or CG. 530.

SUMMER COURSES

In order to assist students who may wish to attend the University throughout the year, the College of Engineering will offer a limited number of courses in each curriculum during the Summer Session of the University. Details will be found in the Catalog of the Summer Session, obtainable from the Office of the Registrar.

FLORIDA ENGINEERING AND INDUSTRIAL EXPERIMENT STATION

The Florida Engineering and Industrial Experiment Station is an integral part of the College of Engineering. It is the research division of the College and the development laboratory for Florida's industries. Its function is to initiate and carry on projects in the several fields of engineering and in industrial development. Research of the Station is aimed particularly toward developing new products from Florida's raw materials and toward assisting in the establishment of new industries in the State.

Undergraduates in the College of Engineering who show promise as research workers may be employed to assist in research work in the Station and to prepare themselves for graduate study.

All students in the College will profit from their association with the engineers engaged in research projects and from the opportunity of seeing the principles of engineering being applied to the solution of fundamental and applied problems.

Graduate students may select fundamental problems involved in research projects of the Station for the subject matter of theses that are required of all graduate students majoring in engineering.

All facilities of the College are available for instructional purposes and for use in research projects.

FLORIDA INDUSTRIES COOPERATIVE PLAN

A number of Florida industries, in cooperation with the College of Engineering, have established a cooperative plan for engineering education which provides for industrial cooperation in educating the engineering student by providing that alternate semesters are spent in learning techniques and industrial applications under supervision in selected industrial or government facilities.

Students may apply for the cooperative program during their freshman year in

pre-engineering training by contacting the Dean of the College of Engineering. Acceptance of the student in the program is based upon his academic standing and the availability of a cooperative assignment. Students on the Cooperative Plan will require approximately five years to earn the selected engineering degree since the academic work normally scheduled for the sophomore and junior years is scheduled to require three years. The student normally completes his first and last years of study in residence at the University.

The periods of training in industry are designed to give the student experience as an employee and are intended to be productive as well as educational. He is required to go through the usual employment procedures of interviews, job assignment, training, etc. He draws a salary commensurate with the assignment and his assignments are increased in difficulty each succeeding industrial period to parallel his academic advancement.

Upon assignment to an industry, the cooperative student becomes a member of a two-man team. He alternates with his partner between industrial assignments and his classroom schedules each semester or summer school session. The alternating periods are approximately February 1 to June 15, June 16 to September 15 and September 16 to January 31. One or the other member of the team is always on an industrial assignment so as to give the cooperating industry a continuity in the training program.

Applications may also be made by men in industry who wish to complete their Engineering College course work and need credit for one year or more of college work to earn a degree.

Industrial organizations wishing to cooperate in this plan may communicate with the Dean of the College of Engineering.

Credit will be earned for work done under the Florida Industries Cooperative Plan by prior registration in courses 499 Cooperative Training, carrying the appropriate departmental prefix, and one hour of credit. Credit earned in this manner may not be used to meet the minimum credit requirement for any degree.

ENGINEERING STUDENTS AND LATIN AMERICAN STUDIES

Students who plan a career in Latin American countries may profitably choose certain electives with a view to familiarizing themselves with Latin American languages and civilization. The permitted free electives may be chosen here without formal approval. Further Latin American courses may be taken only if approved as professional electives by the Dean of the College of Engineering.

Suggested Latin American area courses include the following: Spanish language and literature, Brazilian language and literature, Latin American history, government, geography, sociology, and (following general economics) Latin American economics.

ENGINEERING LABORATORIES

The practicality of an engineering education depends in large measure upon the engineering laboratories. A working knowledge of machinery, dynamos, turbines, boilers, microscopes, and measuring equipment—depending upon the branch of engineering chosen—is an inherent part of the student's education. It is, therefore, the aim of the College of Engineering to provide the most modern equipment available so that when the student enters his profession he will be well acquainted with equipment currently in use as well as with the basic principals underlying their function.

To this end the College of Engineering has procured materials and equipment for its laboratories which serve the dual purpose of student instruction and research on new and continuing projects for the Engineering and Industrial Experiment Station. The close coordination of teaching and research in the College of Engineering cannot be

overemphasized. Wherever feasible, students are given an opportunity to observe and participate in research projects of the Station. Students who may benefit by additional laboratory work, and who have the necessary educational experience, may be given special permission to carry on individual experimentation in research.

MASTER OF SCIENCE IN ENGINEERING

See the Graduate School section of the *Catalog*.

All instructional departments in the College of Engineering offer graduate work leading to the degree of Master of Science in Engineering.

There is considerable demand for engineers with graduate degrees, particularly in research, design and development work, and teaching. The facilities of the College, including the Florida Engineering and Industrial Experiment Station, are exceptionally well adapted for graduate study. Any undergraduate student whose scholastic average is well above average is urged to consider seriously the possibility of doing graduate work. The Dean and the various members of the staff of the College will be happy to confer with students in regard to graduate study.

DOCTOR OF PHILOSOPHY DEGREE

The Doctor of Philosophy Degree is awarded in Chemical Engineering, Civil Engineering (Sanitary Engineering and Structural Engineering), and Electrical Engineering. The general requirements for this degree are included in this catalog under The Graduate School. Further details may be secured from the Dean of the Graduate School or the Dean of the College of Engineering.

PROFESSIONAL DEGREES

The Professional Degree of Aeronautical Engineer, Agricultural Engineer, Chemical Engineer, Civil Engineer, Electrical Engineer, Industrial Engineer or Mechanical Engineer will be granted to a graduate of the College of Engineering of the University of Florida who has:

(a) Shown evidence of having satisfactorily practiced his profession for a minimum of five years following receipt of the Bachelor's degree, during the last two years of which he shall have been in responsible charge of important engineering work. A graduate who is a registered engineer in the State of Florida will be accepted as satisfying this requirement.

(b) Presented a thesis showing originality and independent thinking and of such quality as to be acceptable for publication by the technical press or a professional society.

(c) Satisfactorily passed an examination at the University upon the thesis and professional work.

A candidate for a professional degree must make application to the Dean of the College of Engineering prior to March 1 or November 1 of the semester in which he expects to have the degree conferred. He must also make application for a degree to the Registrar in accordance with the dates specified in the University Calendar. If the candidate appears to satisfy requirements listed in section (a) above, the Dean will appoint a committee which shall satisfy itself that the candidate has fulfilled all requirements for the degree and shall report its recommendations to the faculty of the College of Engineering which will have final authority to recommend to the President and the Board of Control the conferring of the degree.

HONOR STUDENTS

Honor Student Designation.—To be eligible for the designation of Honor Student in the College of Engineering a student must have earned an honor point average of 3.20 or higher in all work taken while in the Upper Division. To be eligible for such

designation he must also have been registered in the College of Engineering for at least one semester and have received credit for a minimum of 16 hours of work. A student who meets these requirements will be notified in writing by the Dean's Office.

An Honor Student, so long as he maintains the necessary scholastic standing, may be granted by the Dean, upon recommendation of the department head, certain privileges.

Graduation with Honors.—To graduate with Honors, a student must have completed the work of the Upper Division and must have received an honor point average of 3.20 or higher in all work taken while registered in the Upper Division.

Graduation with Honors is not dependent upon the student's having been designated as an Honor Student, nor does such designation insure subsequent graduation with Honors.

Graduation with High Honors.—A student may be graduated with High Honors provided he meets the following requirements:

A. (1) Has secured an honor point average of at least 3.40 in all work taken while registered in the Upper Division.

(2) Commences work on a High Honors project normally two semesters prior to graduation but, in any case, not later than the beginning of his last semester.

(3) Completes this independent work and presents a thesis satisfactory to the committee and to the faculty of the College.

(4) Satisfactorily passes a comprehensive examination given him by his committee. This examination shall, in general, be of an oral type. Final date for this examination shall be no later than 14 days prior to the date of convocation.

Or

B. In those cases where a student will apparently secure an honor point average of 3.80 or higher in work taken in the Upper Division, he may, upon recommendation of the department head and approval of the Dean, be invited to appear before a special committee for an examination. This examination shall be administered not later than 14 days prior to the date of convocation. The committee will report its findings to the Dean through the department head, after which the student may be considered for recommendation by the faculty of the College of Engineering for graduation with High Honors. In such cases, graduation with High Honors is not on a scholastic basis alone, but is also based upon breadth of knowledge as evidenced by the satisfactory completion of the comprehensive examination.

Credit may be obtained for High Honors project work by prior registration in courses numbered 497 and 498 carrying the appropriate departmental prefix. Credit in these courses is variable from zero to three hours and must be determined at the time of registration. The total credit allowed for such work shall in no case exceed three credit hours.

A copy of the detailed regulations governing graduation with High Honors may be obtained from the Office of the Dean.

COLLEGE REGULATIONS

English Requirement.—Responsibility for the correct and effective use of his spoken and written English rests primarily upon the student. Any instructor in the College of Engineering may, at any time, with the approval of the head of his de-

partment and the Dean of the College of Engineering, require a student who shows a deficiency in English to complete additional courses, over and above the curriculum requirements in the Department of English.

Thesis.—Theses are not required of candidates for the baccalaureate degree in the College of Engineering. However, exceptional students may be granted permission by the Dean of the College, upon recommendation of the head of the department, to undertake a thesis in lieu of required or elective work in the department in which he is enrolled. Not more than four semester hours will be allowed for such thesis work.

Credit for Practical Work.—Upon the recommendation of the head of the department and the approval of the Dean, a student during his course of study may do practical work under competent supervision in industry. By submitting a satisfactory report, based upon a previously approved outline, and by passing an examination, he may receive college credit not to exceed 3 semester hours.

Average Required for Graduation.—The requirements for graduation with a Bachelor's degree is a composite average of "C" or higher in all work required in the Upper Division of the College of Engineering as well as all work taken while registered in the College of Engineering.

Plant Trip Requirement.—All candidates for the Bachelor's degree must take part in a plant inspection trip. Details concerning this requirement should be secured by each student from the head of the department in which he is enrolled.

ADMISSION REQUIREMENTS

To be admitted to the College of Engineering the student should present a certificate of graduation from the University College or the equivalent and be certified by the Entrance Committee of the College of Engineering as qualified to pursue a curriculum leading to a degree in engineering. A student in the University College must choose the proper prerequisite subjects for his professional courses if he desires to graduate in minimum time. Furthermore, he must assume full responsibility for registering for all required courses in their proper sequence and for fulfilling all requirements for admission to the College of Engineering.

Students whose records in the University College indicate that they are qualified to take the professional courses in Engineering will be admitted to the College of Engineering upon completion of the following courses:

1. University College courses:

	Credits
C-1.—American Institutions	8
*C-2.—The Physical Sciences	6
C-3.—Reading, Speaking and Writing—Freshman English	8
*C-4.—Fundamental Mathematics and Logic	6
C-5.—The Humanities	8
Military Science	4
Physical Fitness	0
	40

2. Engineering prerequisites:

	Credits
CY. 217-218.—General Chemistry and Qualitative Analysis	8
MS. 105-106.—Basic Mathematics	8
MS. 353.—Differential Calculus	4
EGR. 181-182.—Engineering Drawing and Descriptive Geometry	6
	26
TOTAL LOWER DIVISION	66

*In cases where students, on the basis of superior placement test grades, are allowed to omit starred courses, they will need to take, while enrolled in lower division, an equivalent amount of more advanced work in order to be eligible for admission to the College of Engineering.

Since engineering courses numbered 400 and higher are of a professional nature, only students registered in the Engineering College may enroll in such courses except by special permission in writing from the Dean of the College of Engineering.

Regulations pertaining to admission to graduate study are given in detail in the section of the catalog devoted to the graduate division. Students who do not meet the requirements for unqualified admission to graduate study under these regulations, may apply to the College for the planning of a trial program. If accepted by the College, the applicant will be registered as a 5th year student and given a program of about 15 semester hours involving advanced undergraduate courses and including not more than six semester hours of graduate work. Upon completion of this program with an average grade of "B", the student will be given unqualified admission to the graduate school. Up to 12 hours of the trial program may be credited to his graduate record. The trial program will not be continued beyond the original planned period.

CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF AERONAUTICAL ENGINEERING

First Year	Credits
C-1.—American Institutions	8
*C-2.—The Physical Sciences	6
C-3.—Reading, Speaking, Writing—Freshman English	8
*C-4.—Fundamental Mathematics and Logic	6
MS. 105—Basic Mathematics	4
MY. 101-102.—Military Science	2
PL. 101-102.—Physical Fitness	0
	34

Second Year	Credits
MS. 106.—Basic Mathematics	4
CY. 217-218.—General Chemistry and Qualitative Analysis	8
C-5.—The Humanities	8
EGR. 181-182.—Engineering Drawing and Descriptive Geometry	6
MS. 353.—Differential Calculus	4
MY. 201-202.—Military Science	2
PL. 103-104.—Physical Fitness	0
	32

		Third, Fourth, Fifth Years	Credits
(X) PS.	205-6-7-8	General Physics	8
(X) MS.	354	Integral Calculus	4
(X) EGR.	282	Mechanisms and Kinematics	3
(X) AN.	286	Introductory Aerodynamics	3
(X) EM.	365	Engineering Mechanics — Statics	3
MS.	420	Differential Equations	
or			
MS.	521	Higher Mathematics for Engineers and Physicists	3
AN.	385	Aircraft Materials and Processes	3
AN.	381-382	Aerodynamics	6
AN.	383-384	Aerodynamics Lab.	2
EM.	366	Engineering Mechanics — Dynamics	3
EM.	367	Strength of Materials	3
CL.	368	Strength of Materials Laboratory	1
ML.	385	Thermodynamics I	3
ML.	387	Mechanical Laboratory I	1
AN.	390	Aircraft Propulsion	3
ML.	481	Internal Combustion Engines	3
ML.	483	Internal Combustion Engines Laboratory	1
AN.	495	Elementary Aircraft Flutter and Vibration	2
AN.	493-494	Aircraft Structures Laboratory	2
AN.	491-492	Seminar	2
AN.	487-488	Aircraft Structures	8
AN.	485-486	Airplane Design	6
EL.	341-342	Elements of Electrical Engineering	6
EL.	349-350	Electrical Laboratory	2
ML.	489-490	Manufacturing Operations I and II	6
		Approved Non-technical Electives	6
			93

Lower Division Credit Hours Required	66
Upper Division Credit Hours Required	93
Total	159**

*Students desiring to graduate in 4 years must show superior placement tests grades, in which case their programs may be accelerated by waiving courses C-2 and C-4. Students who do not take C-2 and C-4 should make certain that they contact College of Engineering counselors before registration for help in developing their schedules. Such students should complete courses designated by "X" during their first two years in residence.

**In cases where C-2 and C-4 are not taken, the total credit hours required will be decreased proportionately.

CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF AGRICULTURAL ENGINEERING

First Year	Credits
C-1.—American Institutions	8
*C-2.—The Physical Sciences	6
C-3.—Reading, Speaking, Writing—Freshman English	8
*C-4.—Fundamental Mathematics and Logic	6
MS. 105.—Basic Mathematics	4
MY. 101-102.—Military Science	2
PL. 101-102.—Physical Fitness	0
	34

Second Year	Credits
MS. 106.—Basic Mathematics	4
CY. 217-218.—General Chemistry and Qualitative Analysis	8
C-5.—The Humanities	8
EGR. 181-182.—Engineering Drawing and Descriptive Geometry	6
MS. 353.—Differential Calculus	4
MY. 201-202.—Military Science	2
PL. 103-104.—Physical Fitness	0
	32

		Third, Fourth, Fifth Years	Credits
(X)	PS. 205-6-7-8	General Physics	8
(X)	MS. 354	Integral Calculus	4
(X)	AG. 306	Farm Machinery	3
(X)	GY. 203	Elements of Physical Geology	3
(X)	AL. 309	General Animal Husbandry	3
(X)	EM. 365	Engineering Mechanics—Statics	3
	BTY. 101-102	General Botany	6
	AY. 221	General Field Crops	3
	EL. 341-342	Elements of Electrical Engineering	6
	EL. 349-350	Electrical Laboratory	2
	EM. 366	Engineering Mechanics—Dynamics	3
	CL. 223	Surveying	3
	SLS. 301	Soils	3
	EM. 367	Strength of Materials	3
	EM. 327	Hydraulics	4
	ML. 385	Thermodynamics I	3
	ML. 387	Mechanical Laboratory I	1
	CL. 368	Strength of Materials Laboratory	1
	AG. 301	Drainage and Irrigation	3
	AG. 302	Farm Motors	3
	AG. 401	Farm Structures	3
	AG. 403	Agricultural Engineering Investigations	2
	AG. 408	Soil and Water Conservation	3
	AG. 409	Seminar	1
	AS. 306	Farm Management	3
	HE. 212 or HE. 341	Vegetable Gardening or Citrus Growing	3
		Electives	14
			97

Lower Division Credit Hours Required	66
Upper Division Credit Hours Required	97
Total	163**

*Students desiring to graduate in 4 years must show superior placement test grades, in which case their programs may be accelerated by waiving courses C-2 and C-4. Students who do not take C-2 and C-4 should make certain that they contact College of Engineering counselors before registration for help in developing their schedules. Such students should complete courses designated by "X" during their first two years in residence.

**In cases where C-2 and C-4 are not taken, the total credit hours required will be decreased proportionately.

CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF CHEMICAL ENGINEERING

First Year	Credits
C-1.—American Institutions	8
*C-2.—The Physical Sciences	6
C-3.—Reading, Speaking, Writing—Freshman English	8
*C-4.—Fundamental Mathematics and Logic	6
MS. 105.—Basic Mathematics	4
MY. 101-102.—Military Science	2
PL. 101-102.—Physical Fitness	0
	34

Second Year	Credits
MS. 106.—Basic Mathematics	4
CY. 217-218.—General Chemistry and Qualitative Analysis	8
C-5.—The Humanities	8
EGR. 181-182.—Engineering Drawing and Descriptive Geometry	6
MS. 353.—Differential Calculus	4
MY. 201-202.—Military Science	2
PL. 103-104.—Physical Fitness	0
	32

		Third, Fourth, Fifth Years	Credits
(X) PS.	205-6-7-8	General Physics	8
(X) MS.	354	Integral Calculus	4
(X) CY.	331	Introductory Quantitative Analysis	4
(X) CG.	347	Industrial Stoichiometry	4
EM.	365	Engineering Mechanics—Statics	3
EM.	369	Applied Mechanics for Chemical Engineers	3
CY.	301-302	Organic Chemistry	8
CY.	401-402	Physical Chemistry	6
CY.	405-406	Physical Chemistry Laboratory	2
CG.	348	Industrial Stoichiometry and Fuels	4
CG.	355-356, 457	Principles of Chemical Engineering, I, II, III	8
CG.	364, 465	Chemical Engineering Thermodynamics I, II	6
CG.	442	Chemical Engineering Seminar	1
CG.	443-444	Chemical Engineering Laboratory	4
CG.	451	Chemical Engineering Economics	2
CG.	454	Chemical Engineering Process Design	5
EL.	341-342	Elements of Electrical Engineering	6
EL.	349-350	Electrical Laboratory	2
ML. or ML.	384 or 486	Metallography and Heat Treatment Power Engineering	3
		Non-technical Electives	6
		Approved Electives	3
			92

Lower Division Credit Hours Required	66
Upper Division Credit Hours Required	92
Total	158**

*Students desiring to graduate in 4 years must show superior placement test grades, in which case their programs may be accelerated by waiving courses C-2 and C-4. Students who do not take C-2 and C-4 should make certain that they contact College of Engineering counselors before registration for help in developing their schedules. Such students should complete courses designated by "X" during their first two years in residence.

**In cases where C-2 and C-4 are not taken, the total credit hours required will be decreased proportionately.

CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF CIVIL ENGINEERING

First Year	Credits
C-1.—American Institutions	8
*C-2.—The Physical Sciences	6
C-3.—Reading, Speaking, Writing—Freshman English	8
*C-4.—Fundamental Mathematics and Logic	6
MS. 105.—Basic Mathematics	4
MY. 101-102.—Military Science	2
PL 101-102.—Physical Fitness	0
	34

Second Year	Credits
C-5.—The Humanities	8
MS. 106.—Basic Mathematics	4
CY. 217-218.—General Chemistry and Qualitative Analysis	8
EGR. 181-182.—Engineering Drawing and Descriptive Geometry	6
MS. 353.—Differential Calculus	4
MY. 201-202.—Military Science	2
PL. 103-104.—Physical Fitness	0
	32

		Third, Fourth, Fifth Years	Credits
(X) PS.	205-6-7-8	General Physics	8
(X) MS.	354	Integral Calculus	4
(X) CL.	223	Surveying	3
(X) CL.	226	Higher Surveying	2
(X) EM.	365	Engineering Mechanics—Statics	3
CL.	311	Structural Drawing	2
GY.	210	Engineering Geology	3
EM.	377	Mechanics of Materials	4
EM.	366	Engineering Mechanics—Dynamics	3
CL.	326	Statics of Simple Structures	4
ML.	381	Elementary Heat Power	3
CL.	323	Materials Laboratory	2
EM.	327	Hydraulics	4
CL.	329	Water Supply and Treatment	3
CL.	332	Plain Concrete	2
CL.	338	Statically Indeterminate Structures	3
EL.	343	Elements of Electrical Engineering	3
CL.	429	Sewerage	3
CL.	433	Design in Reinforced Concrete	3
CL.	412	Civil Engineering Seminar	1
		General Option	Credits
CL.	439	Highway Location and Drainage	3
CL.	435	Design in Metals and Timber	3
CL.	424	Soil Mechanics	3
CL.	433	Foundation and Harbor Structures	2
CL.	450	Highway Construction and Materials	3
CL.	444	Construction Methods and Estimating	3
		Technical Electives	9
		Non-Technical Electives	5
			94

		Municipal and Public Health Engineering Option	Credits
CY.	331	Introductory Quantitative Analysis	4
BCY.	305	Basic Introductory Bacteriology	3
BCY.	307	Introductory Bacteriology Laboratory	1
CL.	439	Highway Location and Drainage	
or			
CL.	422	Public Health Engineering	3
CY.	315	The Chemistry of Water Treatment	3
CL.	427	Public Health Engineering Laboratory	3
		Technical Electives	9
		Non-technical Electives	5
			94

Lower Division Credit Hours Required	66
Upper Division Credit Hours Required	94
Total	160**

*Students desiring to graduate in 4 years must show superior placement test grades, in which case their programs may be accelerated by waiving courses C-2 and C-4. Students who do not take C-2 and C-4 should make certain that they contact College of Engineering counselors before registration for help in developing their schedules. Such students should complete courses designated by "X" during their first two years in residence.

**In cases where C-2 and C-4 are not taken, the total credit hours required will be decreased proportionately.

CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF ELECTRICAL ENGINEERING

First Year	Credits
C-1.—American Institutions	8
*C-2.—The Physical Sciences	6
C-3.—Reading, Speaking, Writing—Freshman English	8
*C-4.—Fundamental Mathematics and Logic	6
MS. 105.—Basic Mathematics	4
MY. 101-102.—Military Science	2
PL. 101-102.—Physical Fitness	0
	34

Second Year	Credits
MS. 106.—Basic Mathematics	4
CY. 217-218.—General Chemistry and Qualitative Analysis	8
C-5.—The Humanities	8
EGR. 181-182.—Engineering Drawing and Descriptive Geometry	6
MS. 353.—Differential Calculus	4
MY. 201-202.—Military Science	2
PL. 103-104.—Physical Fitness	0
	32

Third, Fourth, Fifth Years			Credits
(X) PS.	205-6-7-8	General Physics	8
(X) MS.	354	Integral Calculus	4
(X) EL.	211	Introduction to Electrical Engineering	3
(X) EGR.	282	Mechanisms and Kinematics	3
(X) EM.	365	Engineering Mechanics—Statics	3
ML.	381	Thermodynamics I	3
EM.	366	Engineering Mechanics—Dynamics	3
EM.	367	Strength of Materials	3
EL.	361-362	Electric Circuits	8
EL.	363	Electrical Machinery I	4
EL.	346	Elementary Electronics	4
ML.	489	Manufacturing Operations I	3
IG.	463	Specifications, Contracts, Ethics and Industrial Safety	3
EL.	441-442	Electrical Engineering, Seminar	2
		Electives	15**
MS.	423	Mathematics for Electrical Engineers	3

Power Option			Credits
EL.	467-468	Electrical Machinery III and IV	10
EL.	473	Industrial Electronics	4
EL.	474	Electrical Engineering Problems (Power)	4
			88

Communications Option			Credits
EL.	465-466	Communication Engineering	10
EL.	471	Electrical Machinery II	4
EL.	472	Electrical Engineering Problems (Electronics)	4
			88

Lower Division Credit Hours Required	66
Upper Division Credit Hours Required	88
Total	154***

*Students desiring to graduate in 4 years must show superior placement test grades, in which case their programs may be accelerated by waiving courses C-2 and C-4. Students who do not take C-2 and C-4 should make certain that they contact College of Engineering counselors before registration for help in developing their schedules. Such students should complete courses designated by "X" during their first two years in residence.

**At least 6 hours of electives shall be non-technical, and at least 6 hours shall be from the approved technical list.

***In cases where C-2 and C-4 are not taken, the total credit hours required will be decreased proportionately.

CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF INDUSTRIAL ENGINEERING

First Year	Credits
C-1.—American Institutions	8
*C-2.—The Physical Sciences	6
C-3.—Reading, Speaking, Writing—Freshman English	8
*C-4.—Fundamental Mathematics and Logic	6
MS. 105.—Basic Mathematics	4
MY. 101-102.—Military Science	2
PL. 101-102.—Physical Fitness	0
	34

Second Year	Credits
MS. 106.—Basic Mathematics	4
CY. 217-218.—General Chemistry and Qualitative Analysis	8
C-5.—The Humanities	8
EGR. 181-182.—Engineering Drawing and Descriptive Geometry	6
MS. 353.—Differential Calculus	4
MY. 201-202.—Military Science	2
PL. 103-104.—Physical Fitness	0
	32

		Third, Fourth, Fifth Years	Credits
(X) PS.	205-6-7-8	General Physics	8
(X) MS.	354	Integral Calculus	4
(X) EM.	365	Engineering Mechanics—Statics	3
(X) EGR.	282	Mechanisms and Kinematics	3
(X) IG.	201	Introduction to Industrial Engineering	2
ES.	201-202	Basic Economics	6
ATG.	211-212	Elementary Accounting	6
EL.	341-342	Elements of Electrical Engineering	6
EL.	349-350	Electrical Laboratory	2
EM.	366	Engineering Mechanics—Dynamics	3
EM.	367	Strength of Materials	3
ML.	489-490	Manufacturing Operations I and II	6
IG.	371	Job Analysis and Evaluation	2
IG.	372	Time and Motion Study	3
ATG.	313	Cost Accounting	3
IG.	460	Engineering Economy	3
ML.	385	Thermodynamics I	3
IG.	470	Plant Operation and Control	4
IG.	469	Plant Location, Selection and Layout	4
IG.	472	Human Engineering	2
IG.	463	Specifications, Contracts, Ethics and Industrial Safety	3
IG.	479	Industrial Engineering Seminar	1
		Approved Electives	12
			92

Lower Division Credit Hours Required	66
Upper Division Credit Hours Required	92
Total	158**

*Students desiring to graduate in 4 years must show superior placement test grades, in which case their programs may be accelerated by waiving courses C-2 and C-4. Students who do not take C-2 and C-4 should make certain that they contact College of Engineering counselors before registration for help in developing their schedules. Such students should complete courses designated by "X" during their first two years in residence.

**In cases where C-2 and C-4 are not taken, the total credit hours required will be decreased proportionately.

CURRICULUM LEADING TO THE DEGREE OF BACHELOR OF MECHANICAL ENGINEERING

First Year	Credits
C-1.—American Institutions	8
*C-2.—The Physical Sciences	6
C-3.—Reading, Speaking, Writing—Freshman English	8
*C-4.—Fundamental Mathematics and Logic	6
MS. 105.—Basic Mathematics	4
MY. 101-102.—Military Science	2
PL. 101-102.—Physical Fitness	0
	34

Second Year	Credits
MS. 106.—Basic Mathematics	4
CY. 217-218.—General Chemistry and Qualitative Analysis	8
C-5.—The Humanities	8
EGR. 181-182.—Engineering Drawing and Descriptive Geometry	6
MS. 353.—Differential Calculus	4
MY. 201-202.—Military Science	2
PL. 103-104.—Physical Fitness	0
	32

		Third, Fourth, Fifth Years	Credits
(X) PS.	205-6-7-8	General Physics	8
(X) MS.	354	Integral Calculus	4
(X) EGR.	282	Mechanisms and Kinematics	3
(X) ML.	283	Elementary Design	3
(X) CG.	361	Materials of Engineering	3
ML.	384	Metallography and Heat Treatment	3
EM.	365	Engineering Mechanics—Statics	3
ML.	489-490	Manufacturing Operations I and II	6
EM.	366	Engineering Mechanics—Dynamics	3
EM.	367	Strength of Materials	3
EM.	313	Fluid Mechanics	4
CL.	368	Strength of Materials Laboratory	1
ML.	385, 390	Thermodynamics I and II	6
ML.	387, 488	Mechanical Laboratory I and II	2
EL.	341-342	Elements of Electrical Engineering	6
EL.	349-350	Electrical Laboratory	2
IG.	463	Specifications, Contracts, Ethics and Industrial Safety	3
ML.	486	Power Engineering	3
ML.	473-474	Seminar	2
ML.	491	Machine Design I	4
ML.	482	Refrigeration and Air Conditioning	3
ML.	484	Refrigeration and Air Conditioning Lab.	1
IG.	472	Human Engineering	2
ML.	481	Internal Combustion Engines	3
ML.	483	Internal Combustion Engines Laboratory	1
		Approved Electives	11
			93

Lower Division Credit Hours Required	66
Upper Division Credit Hours Required	93
Total	159**

*Students desiring to graduate in 4 years must show superior placement test grades, in which case their programs may be accelerated by waiving courses C-2 and C-4. Students who do not take C-2 and C-4 should make certain that they contact College of Engineering counselors before registration for help in developing their schedules. Such students should complete courses designated by "X" during their first two years in residence.

**In cases where C-2 and C-4 are not taken, the total credit hours required will be decreased proportionately.

SPECIAL PROGRAM FOR NUCLEAR TECHNOLOGISTS

General Statement. In cooperation with the Atomic Energy Commission, the University of Florida offers a special program of concentrated courses designed to give intense training to scientists and engineers in the phases of engineering, mathematics, chemistry, and physics which are a fundamental part of the essential knowledge for scientists and engineers who will operate works in the field of Nuclear Technology.

Objective of Program. The need for highly trained people to work in Nuclear Technology is very great. The Oak Ridge National Laboratory operates a school of Reactor Technology for the Atomic Energy Commission. Under this program of University participation it is planned to have the basic unclassified work, and that portion not requiring the unique facilities at the Oak Ridge National Laboratory, given by the universities. The courses at the University of Florida will be on the intermediate level in chemistry, mathematics, physics, heat transfer, fluid flow, metallurgy, stress analysis, and thermodynamics. At Oak Ridge the students will be given applications of these principles to specific reactor designs.

Term of the Course. The program demands the full time of the student for a six-month period. The schedule of courses to be given by the University is as follows:

Beginning on	*Ending on*
Class A, February 11, 1957	August 9, 1957
Class B, August 12, 1957	February 14, 1958
Class C, February 17, 1958	August 8, 1958
Class D, August 11, 1958	February 13, 1959

Eligibility. It is expected that the majority of those participating in this special program will be persons certified by the Atomic Energy Commission. It is possible that others selected by the University of Florida staff, responsible for this program, may be permitted to participate.

Graduate Credit. If a student in this program meets all the requirements for admission to the Graduate School at the University of Florida, it is possible that the courses which he completes may be applied toward some of the requirements for a graduate degree. The courses that can be applied toward a graduate program and the amount of credit will vary with the individual, but in no case will these credits be considered unless the participant, at the time of enrollment, meets all of the requirements for admission to graduate study at the University of Florida. It is entirely possible that others who do not meet these requirements may participate in and benefit from the program.

The Courses. While the courses will carry University Catalog numbers and credits, they will be specially designed for the purposes stated above. They are open only to those specially selected for the program. It is expected that all participants will have the equivalent of at least a Bachelor's degree in one of the areas of engineering or the physical sciences, and all the courses require the satisfactory completion of differential equations and at least one year of college physics and chemistry.

SPECIAL COURSES

CG. 641.—Heat Transmission and Fluid Flow. 2 hours per week for 6 months. 3 credits. Prerequisites: MS. 521 or equivalent.

Mechanism of heat transfer, steady and unsteady state, process design, application to nuclear reactors.

CY. 510.—Chemistry for Nuclear Engineers. 3 hours per week for 6 months. 3 credits. Prerequisites: One year general chemistry and preferably 4-8 hours of physical chemistry.

Fundamental concepts of chemistry, states of matter, chemical combinations, atomic structure, types of reaction, chemical equilibrium, solutions, radio-chemical separations and analysis, chemistry of heavy metals and fission products, radiation chemistry, isotope separation.

EM. 512.—Stress Analysis for Nuclear Engineers. 2 hours per week for 6 months. 3 credits. Prerequisites: EM. 365 and MS. 354.

Stress and deformation, stresses due to axial loads, pressure containers, torsional stress, members with transverse loads, axial loads combined with bending, column action, combined stresses, elastic strain energy, plastic design, application to clad fuel plates, rods, cylinders, pressure shells, thermal shields.

EM. 513.—Fluid Mechanics for Nuclear Engineers. 2 hours per week for 6 months. 3 credits. Prerequisites: EM. 365 and MS. 354.

Fluid statics, kinematics of fluid flow, impulse-momentum principle, similarity and dimensional analysis, viscosity and friction loss, flow of incompressible fluids in pipes, fluid measuring devices, flow of compressible ideal fluids, flow of compressible viscous fluids and two-phase flow, experimental methods.

MS. 522-523.—Higher Mathematics for Engineers and Physicists. 4 hours per week for 6 months. 6 credits. Prerequisite: MS. 354 or equivalent.

Special topics in calculus, series solutions of differential equations, boundary-problems and Fourier series, vector analysis, complex variables, the Laplace transform.

ML. 530.—Thermodynamics for Nuclear Engineers. 2 hours per week for 6 months. 3 credits. Prerequisites: One year of physics and one year of chemistry.

Fundamental concepts, laws, properties of fluids, characteristics of gases, the flow of fluids, vapor power cycles, turbines, gas and turbine power cycles.

ML. 570.—Metallurgy for Nuclear Engineers. 2 hours per week for 6 months. 3 credits. Prerequisites: One year each of college chemistry, physics, and mathematics.

The crystalline nature of metals, principles of alloying diffusion in metals and alloys, hardening of metals and alloys, solid state metallurgy, corrosion, reactor materials.

PS. 514.—Physics for Nuclear Engineers. 3 hours of lecture and 2 hours of laboratory per week for 6 months. 6 credits. Prerequisite: PS. 317 or equivalent.

Fundamentals of physics, theory of the nucleus, nuclear disintegration, natural and artificial radioactivity, statics of systems of particles, rigid bodies, motions of particles and of rigid bodies under constant and variable forces, the concept of a collision, the Maxwell-Boltzmann distribution, Quantum mechanics, experimental foundations of nuclear physics.

SCHOOL OF FORESTRY

A Unit of the College of Agriculture

GENERAL STATEMENT

All work offered in the School of Forestry meets the highest requirements of forestry instruction in this country. The School is accredited by the Society of American Foresters.

The primary objective of the School of Forestry is to train men for professional careers in forest management, wood utilization and wildlife management. Special emphasis is placed on instilling in students an aggressive and scientific attitude toward the problems to be met after graduation.

The study programs of the School are designed to provide students with an education of sufficient breadth to qualify them for advancement to positions of responsibility and leadership. In addition to the arts, humanities and social studies offered in the University College, the student receives thorough training in the basic sciences and in the essential phases of his chosen field. The School of Forestry offers work under three curriculums leading to the degree, Bachelor of Science in Forestry.

I. Forest Management

This curriculum is designed for those students whose primary interests lie in the production of timber crops which provide the raw materials for wood-using industries. The forest manager's task is to manage forest lands so that adequate supplies of timber crops will be continuously available and maximum return may be received from the land. This work requires training in the skillful application of business methods, basic scientific facts and technical procedures in the operation of forest properties. It requires a thorough knowledge of the factors affecting tree growth, forest regeneration and timber stand development; a clear understanding of economic and business principles; considerable initiative and ingenuity; clear thinking; and a great personal interest in the business of producing timber crops.

II. Forest Products Technology

This curriculum is designed for students who wish to enter into careers dealing with the development and production of more and better products from our nation's forests. Wood, the primary product of the forest, receives special attention. Theoretical and practical aspects of logging and lumbering, seasoning, gluing, preservative treatment, wood anatomy and timber mechanics, are subjects in which the student may choose to specialize. Wood-using industries, railroads, and utility companies, the armed forces, private and government research laboratories industry continually seek men who have had forest products training.

III. Wildlife Management

This curriculum is offered for those students primarily interested in the production of annual crops of game birds and mammals for recreational purposes. The wildlife manager's chief objective is to manage each parcel of land so that it will produce its due share of the total wildlife population. This is done by recognizing and providing for the requirements of wildlife in the various operations connected with other uses of the land. For this reason the wildlife manager must know the life histories of all the wild animals and birds he is producing as well as the methods of handling land so that both the food and cover requirements will be provided. The wildlife manager frequently comes into contact with the public, since the wildlife he produces is public property and is used by the public.

The School of Forestry has varied facilities for carrying out its instructional and research objectives. Two forests are available for field laboratories, demonstration and research work. The University of Florida Conservation Reserve, consisting of 2500 acres of diversified forest lands in Putnam County, Florida, is under a long-time lease agreement with the United States Department of Agriculture. The Austin Cary Memorial Demonstration Forest, consisting of 2083 acres of flatwoods forest land, located 8 miles northeast of Gainesville, is used as a field laboratory and demonstration and experimental forest where the student receives practical field experience. The School of Forestry has a nursery and a small sawmill with necessary equipment located on this forest for use in instruction. A dry kiln and wood-preservation laboratory are located on the University Campus.

There are several forest products industries located in the immediate vicinity of Gainesville, namely; a wood-preservation plant, pole and cross-tie yard, destructive distillation plant, box and crate factory, excelsior plant and several sawmills. Visits to these industries supplement the student's training in wood processing and wood use. Two large lumber mills with cutting capacities of approximately 100,000 board feet per day are located within a radius of 100 miles of the University. These mills are visited from time to time in connection with the particular courses that have reference to lumber-using industries. The production and manufacture of pulp and paper are studied on cutting sites and in the mills. Two of the three National Forests of the State are less than fifty miles distant. These forests are visited by classes in different fields of work.

The Forestry branch of the main library is housed in Rolfs Hall. The library contains text and reference books and many American and foreign periodicals on forestry and allied subjects.

REQUIREMENTS FOR ADMISSION

(a) Graduation from the University College or its equivalent as determined by the Board of University Examiners, (b) recommendation of the Board of University Examiners, and (c) approval of the Director of the School of Forestry. The student should have completed the courses given in the University College programs of study for Forest Management, Forest Products Technology, or Wildlife Management.

At the time the student enters the University, he should contact the faculty of the School of Forestry for guidance in planning his work.

Transfer students or those with special hour-credit problems who have not completed some of the pre-professional work in University College, may be admitted on probation to the School of Forestry on approval of the Director. Satisfactory completion of the lower-level work will be required.

REQUIREMENTS FOR GRADUATION

Students majoring in Forest Management and Wildlife Management must complete a total of 78 semester hours in the upper division, with an average of C or better. Of this total, 8 hours must be earned during summer camp as follows:

FY. 221 Summer Camp	5
FY. 228 Forest Mensuration	3
	8

(A charge of $100.00 is payable at time of registration for Summer Camp to cover the cost of meals.)

Students majoring in Forest Products Technology must complete one of the following alternative requirements:

1. Complete 78 semester hours of which 8 may be FY. 221 and FY. 228.

2. Complete 70 semester hours and at least ten weeks of summer experience which has prior approval of the faculty. A detailed report by the student describing his work and a favorable report by his employer will be required.

In cases where substitute courses differ in number of credits from the courses for which the substitution is made, adjustments must be made in the elective credits so that the total number of credits is as indicated in the appropriate requirements for graduation.

It is highly recommended that all candidates for the Bachelor of Science in Forestry have three months of work experience in their respective fields before their Senior Year.

GRADUATION WITH HONORS

To graduate with honors, students in the School of Forestry are considered separately from those in the College of Agriculture. For requirements see the general statement for graduation with honors, College of Agriculture.

MASTER OF SCIENCE IN FORESTRY

Courses are offered in the Graduate School leading to the degree of Master of Science in Forestry.

For requirements for the Master's degree, see Graduate School.

CURRICULUMS LEADING TO THE DEGREE OF BACHELOR OF SCIENCE IN FORESTRY

Curriculum I—FOREST MANAGEMENT

Junior Year

Course	First Semester	Credits	Course	Second Semester	Credits
FY. 229.—	Forest Mensuration	3	FY. 309.—	Wood Technology	3
FY. 306.—	Forest Protection	3	CL. 301.—	Forest Surveying	3
FY. 301.—	Silvics I	3	FY. 302.—	Silvics II	3
EY. 351.—	Forest Entomology	3	FY. 418.—	Logging and Lumbering	3
SLS. 300.—	Forest Soils	3	EH. 356.—	Report Writing	3
Approved	Electives	3	Approved	Electives	3
		18			18

Senior Year

Course	First Semester	Credits	Course	Second Semester	Credits
FY. 401.—	Silviculture	3	FY. 409.—	Forest Finance	3
FY. 412.—	Seminar	1	FY. 420.—	Forest Economics	3
FY. 419.—	Principles of Forest Management	3	FY. 416.—	Applied Forest Management	3
FY. 443.—	Forest Statistics	3	PT. 325.—	Forest Pathology	3
FY. 446.—	Forest Photogrammetry	3	Approved	Electives	4
Approved	Electives	5			16
		18			

APPROVED ELECTIVES:

FY.—Courses in 300 and 400 series
BTY. 401.—Plant Ecology
GPY. 330.—Maps, Charts and Graphs
ES. 382.—Principles of Resource Utilization
ATG. 313.—Cost Accounting
BS. 373.—Personnel Management
AS. 311.—Rural Law
AS. 412.—Land Economics
RE. 492.—Real Estate Finance
RE. 493.—Real Estate Law
Other courses with faculty approval.

Curriculum II—FOREST PRODUCTS TECHNOLOGY

Junior Year

Course	First Semester	Credits
FY. 319.—Advanced Wood Technology		3
CY. 362.—Organic Chemistry		3
CY. 363.—Organic Chemistry Lab.		2
PS. 201.—General Physics		3
PS. 207.—Lab. for Physics		1
ES. 202.—Basic Economics		3
Approved Electives		3
		18

Course	Second Semester	Credits
FY. 418.—Logging and Lumbering		3
ML. 181.—Engineering Drawing		3
PS. 202.—General Physics		3
PS. 208.—Lab for Physics		1
EH. 356.—Report Writing		3
Approved Electives		4
		17

Senior Year

Course	First Semester	Credits
FY. 412.—Seminar		1
FY. 415.—Timber Mechanics and Testing		3
FY. 421.—Kiln and Air Drying of Lumber		3
FY. 443.—Forest Statistics		3
Approved Electives		8
		18

Course	Second Semester	Credits
PT. 325.—Forest Pathology		3
FY. 414.—Wood Preservation		2
FY. 449.—Log and Lumber Grades		3
Approved Electives		9
		17

APPROVED ELECTIVES:

FY. 301-2.—Silvics
FY. 446.—Forest Photogrammetry
FY. 447.—Logging Practices
FY. 448.—Milling Practices
ATG. 313.—Cost Accounting
EY. 351.—Forest Entomology
IG. 447.—Time and Motion Study
Other Courses with faculty approval.

Curriculum III—WILDLIFE MANAGEMENT

Junior Year

Course	First Semester	Credits
FY. 301.—Silvics I		3
FY. 306.—Forest Protection		3
FY. 353.—Principles of Wildlife Management		3
SLS. 300.—Forest Soils		3
BLY. 209.—Comparative Vertebrate Anatomy		4
Approved Electives		2
		18

Course	Second Semester	Credits
FY. 354.—Techniques in Wildlife Management		3
EH. 356.—Report Writing		3
ML. 181.—Engineering Drawing		3
BTY. 306.—Plant Kingdom		3
Approved Electives		4
		16

Senior Year

Course	First Semester	Credits
FY. 401.—Silviculture		3
FY. 412.—Seminar		1
FY. 419.—Principles of Forest Management		3
FY. 434.—Applied Wildlife Management		3
FY. 436.—Waterfowl Managementt		3
BLY. 513.—Mammalogy		3
Approved Electives		3
		19

Course	Second Semester	Credits
FY. 420.—Forest Economics		3
FY. 435.—Applied Wildlife Management		3
BLY. 514.—Ornithology		3
BTY. 401.—Plant Ecology		4
Approved Electives		3
		16

Approved Electives: Arranged with Advisor.

ONE-YEAR FOREST RANGER COURSE

A Department of the School of Forestry

GENERAL STATEMENT

There is a real need for field trained men to carry out the prescriptions of the professional foresters, as well as to handle simpler forest and mill duties. This one-year course excellently provides the background and skills required for vocational work in the forest and in wood-using industries. A certificate is awarded on successful completion of the course. The school year is concurrent with the University year, opening in September and closing the following August.

REQUIREMENTS FOR ADMISSION

A four-year high school diploma showing adequate mathematics (algebra and plane geometry strongly recommended) is required for entrance. Equivalent training in forest or wood-using industries will receive consideration. Applicants should state previous woods or industrial experiences, if any, on their application forms.

NECESSARY EXPENSE

(1) *Registration Fees*
(Paid by all students)

1st Semester	$ 85
2nd Semester	85
Summer Term	55
Total	$225

(2) *Tuition*
(Non-Florida students)

1st Semester	$185
2nd Semester	185
Summer Term	120
Total	$490

(3) *Books, Tools, Supplies*
(Estimated, all students)

1st Semester	$ 30
2nd Semester	15
Summer Term	5
Total	$ 50

(4) *Living Expenses**

1st Semester		
Room	$ 28	
Board (est.)	200	$228
2nd Semester		
Room	$ 28	
Board (est.)	175	$203
Summer Term		
Room	$ 18	
Board (est.)	105	$123
YEAR (est.)		$554

(5) *Incidental Expense*

(Estimated, including meals for weekends)	$380

There is also a breakage deposit of $10 due on registration—refundable if not used, on completing course.

*Cost of meals for weekends not included. Meals are served Monday through Friday in the school dining hall.

A number of housekeeping apartments are available to married students at reasonable rentals.

The registration fee includes membership in a group health plan, covering hospitalization and surgical fees to a fixed limit; also Athletic Association membership, with admission to University intercollegiate games in Florida.

For detailed information, apply to the Director, School of Forestry, University of Florida, Gainesville, Florida.

CREDIT TRANSFER TO THE UNIVERSITY TOWARD A DEGREE IN FORESTRY

A student at the State Forest Ranger School, upon completion of the course of study, upon having received at least a grade of "B" for the work for which transfer is requested, and upon unanimous recommendation of the staff of the Ranger School, may apply for credit transfer toward the requirements for a degree in forestry as follows:

Number and Name of Course	Credits
FY. 220.—Introduction to Forestry	2
FY. 221.—Summer Camp	5
FY. 226.—Dendrology	2
FY. 228.—Forest Mensuration	3
FY. 306.—Forest Protection	3
FY. 310.—Reforestation and Nursery Practice	3
	18

Application for credit transfer will require the approval of the Director of the School of Forestry.

SCHOOL OF INTER-AMERICAN STUDIES

HISTORY

For more than two decades the University of Florida has promoted interest in Latin America through an active inter-American area study program. The Institute of Inter-American Affairs of the University, created in 1930, pioneered in the organization and coordination of inter-American activities on the campus, and encouraged the establishment of new course offerings in the inter-American field. This division of the University also granted scholarships to students from Latin America so that they might study here certain subjects which were not offered in their own countries, notably courses in agriculture and engineering.

In 1950 steps were taken to expand the inter-American program at the University by establishing the Graduate School of Inter-American Studies to coordinate advanced work in Latin American subjects in the various disciplines. In 1951 the Institute of Inter-American Affairs and the Graduate School of Inter-American Studies were combined into a single University unit with the title of School of Inter-American Studies. The School now is responsible not only for coordinating all undergraduate and graduate course offerings but also for conducting all other aspects of the University's program in the inter-American field.

ADMINISTRATIVE ORGANIZATION

As presently organized, the School is headed by a Director; associated with him is an Assistant Director. Both are nominated by the President and elected by the Board of Control. Each is responsible directly to the President. The faculty of the School includes members of the line faculties of the various departments and colleges who are engaged in teaching courses having inter-American content. The School functions at the graduate level to establish inter-departmental curricula including an area study program, and operates under the rules of the Graduate School. At the undergraduate level, the School coordinates the inter-American programs administered by the various departments and colleges. It also offers advisory services on curricula, and assists in the counseling of students.

Assisting in the administration of the School are an Inter-American Committee concerned with general policy, and a Graduate Advisory Committee and a Special Graduate Faculty concerned with the general supervision of master and doctoral candidates. A U. S. Advisory Committee, consisting of leading citizens interested in Latin America, and a Latin American Advisory Committee, made up of leading Latin American scholars, serve as consulting groups for off-campus activities.

AIMS AND FUNCTIONS

Besides the on-campus functions, the program of the School aims to foster understanding of and mutual appreciation among the peoples of the Western Hemisphere. It encourages in schools, colleges, and universities the teaching of subjects dealing with languages, peoples, and institutions of the Western Hemisphere; it stimulates specific studies common to the Americas; it encourages the exchange of students, professors, and other specialists among colleges and universities of the Americas; it assists government and industry in training and orienting personnel; it disseminates throughout the Western Hemisphere by all available media information concerning the educational, cultural, and commercial life of the peoples and countries of the Americas; it sponsors conferences, institutes, musicales, art exhibits and special lectures on inter-American affairs; it promotes research projects and publications dealing with Latin America; and it attempts otherwise to advance inter-American interests in all fields of human endeavor.

The School is empowered to solicit, receive, and administer such funds as are given to the University for its program of inter-American affairs, subject to State and University regulations. The Director recommends to the President ways to employ such funds and grants for research, for travel in conjunction with research or other official School business, for publications, scholarships, exchange professorships, and conferences, and for other activities and functions designed to foster inter-American understanding and amity.

COOPERATING DISCIPLINES

At the undergraduate level an Inter-American Area Study Program is offered in both the College of Arts and Sciences and the College of Business Administration. At the graduate level, Inter-American Area Study Programs are offered leading to the Master's and the Doctor's degrees. Departments and colleges cooperating in the work of the School of Inter-American Studies by offering courses relating to Latin America include Agricultural Economics, Agronomy, Anthropology, Archeology, Art, Bacteriology, Biology, Botany, Business Organization and Operation, Economics, Education, English, Entomology, Forestry, Geography, History, Horticulture, Journalism, Law, Music, Plant Pathology, Political Science, Portuguese (Brazilian), Sociology, Soils, Spanish, Speech, and Zoology.

FELLOWSHIPS AND SCHOLARSHIPS

The School of Inter-American Studies has available for properly qualified United States and Latin American graduate students a limited number of graduate assistantships.

For many years the University of Florida has awarded annually a limited number of tuition scholarships to superior Latin American students; such scholarships are available to graduates and undergraduates who are able to meet the requirements for admission to the University and the special admission requirements for aliens which are set forth elsewhere in the catalog.

RESEARCH FACILITIES

Library facilities for research by students in the School of Inter-American Studies are being continually augmented through purchases made by members of the staff in the course of their travels in various Latin American areas and through the cooperation of a Library Committee of Latin American scholars, headed by Dr. Emeterio Santovenia of Cuba, who send materials from time to time to the University. A large Caribbean Collection has been in existence for a number of years and it is being added to regularly. For students interested especially in the Spanish background of Florida history, there are available on the campus the Library of the Florida Historical Society and the P. K. Yonge Library of Florida History, which contains the John B. Stetson Collection.

ANNUAL CONFERENCE

Beginning in December 1950 the School of Inter-American Studies in cooperation with the Aluminum Company of America through the Alcoa Steamship Co., Inc., has organized and sponsored a three-day conference dealing with problems of the Carribbean area. These conferences are attended by students, scholars, businessmen, government officials, and others, from countries throughout the Hemisphere. The papers presented at these conferences are published in book form by the University of Florida Press in its Series I.

PUBLICATIONS

Besides Series I mentioned above, the University Press, in cooperation with the School of Inter-American Studies, from time to time issues other inter-American titles. Beginning with Volume XIV, the University Press commenced publication of

the *Handbook of Latin American Studies.* For a full description of Press publications, see the catalog issued by the University of Florida Press.

SPECIAL PROGRAMS

The School of Inter-American Studies administers grants made by governments, organizations, foundations, industries, and individuals for special area surveys, research, publications, and other activities. During the academic year 1951-52, for example, the School organized and administered intensive short-term English-language courses for about 100 Latin American specialists, sent to the University for orientation by the Technical Cooperation Administration, United States Government, as part of the government's "Point Four" program. The School of Inter-American Studies, in cooperation with the Department of Cultural Affairs of the Pan American Union, conducted a survey of research in the Inter-American field in colleges and universities throughout the United States and Canada, which were published in 1953 and 1956.

OTHER ACTIVITIES

Associated with the School of Inter-American Studies is the Center of Inter-American Philately, which was organized to enlarge the scope of the inter-American program. Another vital activity centers in the Inter-American Bibliographical and Library Association. Formerly housed in the Library of Congress, the Association moved to Gainesville in September, 1951, and now occupies an office in the University Library. The Association cooperates closely with the School of Inter-American Studies.

In 1946 the Inter-American Center of Florida in St. Augustine established a "Grove of Educators of the Americas", where a bust or statue of an educator from each of the countries of the Western Hemisphere eventually will be dedicated. In October, 1951, the School of Inter-American Studies arranged to cooperate jointly with the St. Augustine Center in continuing this project. Busts or statues already have been dedicated by Argentina, Venezuela, Ecuador, Cuba, Honduras, Panama, Peru and the United States.

For many years the University has commemorated Pan American Day and Dia de la Raza (Columbus Day) with appropriate ceremonies. The School of Inter-American Studies not only continues this activity but also takes appropriate notice of important national holidays of all Latin American republics. To this end the Plaza of the Americas, in the heart of the campus, displays national flags in front of the twenty trees, which have been dedicated to the Latin American states.

In order to better serve the people of the state and the neighboring area of southeastern United States, the School of Inter-American Studies maintains a Speakers' Bureau of experts in inter-American fields. Their services are available to schools and organizations which may desire lectures pertaining to the countries of Latin America.

The School of Inter-American Studies, in conjunction with other divisions of the University, cooperates on a television program which includes round-table discussions and a variety of entertainment. The School also participates in radio programs dealing with inter-American affairs over the University radio station, WRUF.

During the school year 1952-53, at the invitation of the "Voice of America", the School of Inter-American Studies, in cooperation with the University's Department of Speech, organized a series of weekly broadcasts to the American countries describing Latin American student life on the University of Florida Campus. In

1955 the School, at the invitation of the U. S. Information Agency, prepared a three-tape radio salute to the University of Sao Paulo, Brazil.

ADDITIONAL INFORMATION

The School of Inter-American Studies issues an annual bulletin describing the organization, objectives, and activities of the School; copies of this booklet are available free on application to the Director of the School.

SCHOOL OF JOURNALISM AND COMMUNICATIONS

A Unit of the College of Arts and Sciences

The curricula in the School of Journalism and Communications lead to the degrees Bachelor of Science in Advertising, Bachelor of Science in Journalism or Bachelor of Science in Communications.

The programs provide students with a broad background in liberal arts and sciences—literature, economics, history, political science, sociology, psychology—which are vital aspects of contemporary life and essential to those entering professional careers in printed media or audio-visual media of communications.

A special feature of the communications program makes it possible for students to get practical experience in the School's Radio-TV Production Center.

The general plan of education in this School is arranged so that the student spends about three-fourths of his time on general background courses to gain as large an informed acquaintance with the major areas of human knowledge as possible. The remaining fourth involves the acquisition and practice of professional techniques in relation to this background knowledge.

REQUIREMENTS FOR ADMISSION

(a) Graduation from the University College or its equivalent as determined by the Board of University Examiners, (b) recommendation of the Board of University Examiners, and (c) approval of the Director of the School of Journalism and Communications.

If a student has completed the work of the University College and does not meet these admission requirements he may register in the University College for a program prescribed by the Director of the School of Journalism and Communications. If, at the end of the semester he has shown unmistakably that he is capable of doing work in this field, he will be regularly admitted to the School. If his work in this trial program is unsatisfactory, his admission will be denied.

In addition to the comprehensive courses required in University College, these pre-professional courses are required for admission to this School: COM. 118—Survey of Communications, COM. 201—Writing for Mass Cummunications, ES. 201—Basic Economics, and SCH. 201—Effective Speaking. In addition to the above pre-professional courses, Communications majors must take COM. 212—Radio and Television Announcing.

Transfer students are those with a special hour-credit problem who have not completed some of the preprofessional work in University College, may be admitted conditionally to the School of Journalism and Communications on approval of the Director. They will be *expected,* however, to complete the lower-level work.

REQUIREMENTS FOR DEGREE

The professional courses are concentrated in the Upper Division, where the curricula are divided into three major programs.

Those majoring in the News-Editorial and Public Relations fields will take the Journalism program. The Advertising work in both printed and in audio-visual media is combined in one program. Students interested in Radio-TV will register for the Communications program.

Students wishing to specialize in more than one field may earn two degrees by a fifth year of study.

The minimum requirement for graduation from the School of Journalism and Communications is sixty-four semester hours in which the student must earn an average of C or better and must earn a grade of C or better in ALL professional courses.

Students entering the School of Journalism and Communications must have a working knowledge of typewriting (shorthand is highly recommended for women) and must choose one of the three professional programs of study.

Graduate work in Advertising, Journalism, and Radio-TV are offered through the School of Journalism and Communications leading to the MA degree.

GRADUATION WITH HONORS

Graduation with Honors.—To graduate with Honors, a student must have completed the work of the Upper Division and must have received an honor point average of 3.20 or higher in all work taken while registered in the Upper Division.

Graduation with High Honors.—Students who have earned an honor point average of 3.5 or higher in all work taken in the Upper Division will be invited to take the School's High Honors examination administered by the faculty of the School. Purpose of the examination is to base recommendations for graduation with High Honors on breadth of knowledge as well as scholastic attainment.

SPECIAL PROGRAMS

Agricultural Journalism: A special program leading to a Bachelor of Science degree with emphasis on agricultural journalism is available to students interested in the field. Due to the nature of the highly-specialized training, the program is worked out on an individual basis between the student and the Dean of the College of Agriculture and the Director of the School of Journalism. Agriculture students seeking a single course in fundamental instruction in handling agriculture news and publicity for newspapers, magazines and radio are recommended to register for JM. 320.

Journalism in the Secondary Schools: JM. 515 and JM. 616 offer special training and supervised research for those planning to teach journalism in the secondary schools or those planning to supervise high school publications.

Contemporary Latin American Journalism: JM. 330 is offered as part of the University's Latin American Area Studies Program with special emphasis on Latin American journalistic practices contrasted with those in the United States.

NATIONAL STANDING OF SCHOOL

The program of Journalism at the University of Florida was the first such program in Florida accredited by the American Council on Education for Journalism. The Journalism curriculum, faculty, facilities and alumni achievements have been evaluated regularly by representatives of the American Council on Education for Journalism whose membership includes the American Society of Newspaper Editors, the American Newspaper Publishers Association, the National Editorial Association, the Southern Newspaper Publishers Association and the Inland Press Association as well as journalism educators.

CURRICULA LEADING TO THE BACHELOR OF SCIENCE DEGREES

Freshman Year	Credits
1.—American Institutions	8
2.—Physical Sciences	6
3.—Reading, Speaking and Writing, Freshman English	8
4.—Logic and Mathematics	6
5.—COM. 118	3
6.—Military Science	2
7.—Physical Fitness	0

Sophomore Year	Credits
1.—The Humanities	8
2.—Biological Sciences	6
3.—COM. 201	3
4.—COM. 212 (For Radio-TV majors)	3
5.—SCH. 201	3
or	
SCH. 200 (for Radio-TV majors only)	2
6.—ES. 201	3
7.—Military Science	2
8.—Physical Fitness	0

ADVERTISING PROGRAM (BS ADV DEGREE)

Junior Year	Credits
BS. 433.—Advertising	3
JM. 315.—Typography	2
JM. 325.—Contemporary Affairs	2
JM. 310.—Advertising Copy and Layout	3
BS. 231.—Principles of Marketing	3
BS. 233.—Salesmanship	3
PSY. 207.—Psychology of Advertising	3
LY. 201.—Uses of Books and Library	1
ART. 360.—Layout	3
Electives	9

Senior Year	Credits
ART. 341.—Photography	3
JM. 508.—Public Opinion	3
JM. 509.—Law of Press & Radio-TV	3
JM. 414.—Public Relations	3
JM. 512.—Advertising Campaigns	3
COM. 502.—Radio-TV Advertising	3
JM. 460.—Advertising Seminar	2
Electives	12

JOURNALISM PROGRAM (BSJ DEGREE)

Junior Year	Credits
JM. 301.—Elementary Reporting	3
JM. 302.—Advanced Reporting	2
JM. 315.—Typography	2
*JM. 318.—Newspaper Management	2
JM. 325.—Contemporary Affairs	2
JM. 340.—Editing	2
ART. 341.—Photography	3
LY. 201.—Uses of Books & Library	1
HY. 245.—U. S. History	3
HY. 246.—U. S. History	3
PCL. 201.—American Federal Government	3
PCL. 202.—American State & Local Government	3
Elective	3

Senior Year	Credits
JM. 413.—Magazine and Feature Writing	3
or	
COM. 506.—Radio-TV Reporting	3
JM. 508.—Public Opinion	3
or	
JM. 407.—History of Journalism	3
JM. 509.—Law of Press and Radio-TV	3
*JM. 450.—Applied Journalism	3
JM. 465.—Seminar	2
Elective	18

* Public Relations majors will take JM. 414 and ART 365 instead of JM. 450 and JM. 318.

RADIO-TV PROGRAM (BSC DEGREE)

Junior Year	Credits
COM. 318.—Radio Writing	3
ART. 365.—Design for Television	2
COM. 328.—Radio-TV in the Public Interest	2
COM. 323.—Radio Programming and Production	3
COM. 325.—TV Programming and Production	3
COM. 327.—Writing for TV	3
HY. 245.—United States History	3
HY. 246.—United States History	3
PCL. 201.—American Federal Government	3
PCL. 202.—American State & Local Government	3
LY. 201.—Uses of Books and Library	1
Electives	3

Senior Year	Credits
COM. 426.—Advanced TV Production	5
COM. 460.—Communications Seminar	2
COM. 502.—Radio-TV Advertising	3
JM. 509.—Law of Press & Radio-TV	3
Electives	19

COLLEGE OF LAW

GENERAL INFORMATION

The College of Law, founded in 1909, began its work in the Thomas Hall Dormitory for men under the deanship of Albert J. Farrah, a graduate of the University of Michigan, who served from 1909 until 1912.

Following the administration of Dean Farrah, Thomas W. Hughes served as Dean from 1912 until 1915. The Law Building, erected in 1914, was one of the first permanent units on the campus.

Harry R. Trusler, also a graduate of the University of Michigan, was appointed to the deanship in 1915 and served in that capacity until 1947. During his administration the College of Law was accredited by the New York State Board of Regents in 1917, admitted to membership in the Association of American Law Schools in 1920, and recognized as an approved school by the American Bar Association in 1925.

The College of Law was opened to women students in 1925, and in 1933 the requirements for admission were increased to require an academic degree.

In September of 1941, the entire plant of the College of Law was dedicated and named in the memory of Nathan Philemon Bryan, Chairman of the Board of Control at the time of the founding of the College of Law, and former United States Senator and United States Circuit Judge. Also in 1941 the Law Library was built.

During the summer of 1948 the building which has housed the College of Law since 1914 was completely renovated. A new office suite was added for the Dean and additional offices for members of the faculty were provided. In the spring of 1950 construction of a new wing was completed. The wing provides a library reading room seating approximately one hundred and fifty students, a courtroom-auditorium with a seating capacity of approximately two hundred and fifty, and a suite of offices for the University of Florida Law Review.

The aim of the College is to impart a thorough, scientific, and practical knowledge of the law. It aims to develop keen, efficient lawyers, conversant with the ideals and traditions of the profession. Its policy is characterized by the emphasis of practice as well as theory; pleading as well as historical perspective; skill in drafting, as well as in giving legal information.

ADMISSIONS

Students without previous law school study are admitted at the beginning of the first and second semesters, but are not admitted to the summer session.

PROCEDURE FOR ADMISSION

Applicants for admission to the College of Law are required to file a preliminary application with the University Registrar on or before August 15 for the first semester, December 26 for the second semester. It will be impossible to consider applications received after these dates.

Upon receipt of the preliminary application, the Registrar will furnish final application forms. No applicant will be admitted until he has filed a complete transcript of his record from each law school, college or university attended (other than the University of Florida), and a written statement concerning his previous attendance at other law schools and, if he has attended another law school, a certificate from the Dean thereof that he is in good standing at that institution.

REQUIREMENTS FOR ADMISSION

Beginning Students.—Applicants for admission must have received before admission a 4-year baccalaureate degree from an accredited college or university, except in the case of veterans who present honorable discharges which show not less than 90 consecutive days of active service in the U. S. Army, Air Force, Coast Guard, Navy or Marine Corps. Such veterans will be admitted after they have completed 94 hours of satisfactory work in an accredited college or university if they have maintained a scholastic average of C or higher on all work undertaken. (For information as to the procedure necessary to quality for the various types of educational benefits available to veterans, consult the University catalog.)

Law School Admission Test.—All applicants for admission as beginning students must take the Law School Admission Test given by the Educational Testing Service in cooperation with leading law schools throughout the country. Applicants failing to take the test or obtain a postponement prior to registration as hereinafter stated are ineligible to register for work in the College. A minimum test score is not a requirement for admission to this College, but will be used in connection with guidance and counselling of students after admission. Upon written petition showing reasonable cause, the Dean, at his discretion, may grant permission to postpone the test until the first time it is given after the student enters the College.

The test may be taken before application is made for admission to law school. A fee of $10.00 is charged by the Educational Testing Service and applications to take the test must be sent direct to the Educational Testing Service, 20 Nassau Street, Princeton, New Jersey. Tests are normally given in February, April, August and November, and are scheduled at the University of Florida and other centers throughout the United States on May 4, August 10, November 9, 1957, and February 15, 1958. Requests for the form of application to take the test should be sent to the Educational Testing Service four or five weeks in advance of the date of testing so that the completed application and fee will be received in Princeton no later than ten days prior to the testing date which the candidate has chosen.

Advanced Standing.—A student wishing to transfer from another accredited law school who, at the time of beginning his study of law, qualified for admission to this College under the above stated requirements for beginning students (other than the Law School Admission Test) and who has maintained a scholastic average of C or higher on all previous law school work undertaken, may apply for admission with advanced standing. Courses completed with a grade of C or higher in other accredited law schools will be acceptable for credit up to but not exceeding a total of thirty hours.

In no case will credit be given for correspondence courses or other work not done in residence in an accredited law school.

In no case will a person who has received a law degree from an accredited law school be admitted as a candidate for the LL.B. degree.

INTRODUCTORY PROGRAM FOR BEGINNING STUDENTS

A program designed to acquaint beginning students with basic information concerning the profession to which they aspire and to assist them in the study of law is offered by members of the law faculty, the bench and the bar during the week preceding the opening of classes. The program introduces students to the traditions, ethics, and activities of the legal profession and to the objectives, materials, and methods of law study. Assigned readings are supplemented by lectures, illustrative demonstrations, and practice sessions.

Beginning students are required to report for registration and the Introductory Program in accordance with instructions given to them at the time they are admitted. Failure to report in accordance with such instructions may prevent registration.

FEES AND EXPENSES

Although expenses vary considerably with individual students, an unmarried Florida student attending the College of Law should anticipate expenses of at least $550.00 per semester estimated as follows: Registration fee $75.00; books and supplies $50.00; laundry and cleaning $35.00; room $90.00; board $200.00; incidental expenses $100.00. Non-Florida students are charged a registration fee of $250.00 per semester instead of the $75.00 fee charged Florida students. (Consult the University Catalog for details as to the classification of students as Florida or non-Florida students.)

Late registration increases the registration fee $5.00; this increased fee will not be waived for any reason.

A graduation fee of $10.00 to cover the cost of the candidate's diploma and, rental of cap and gown, is payable at the time of the filing of the candidate's application for graduation.

Consult the University Catalog for the time and place of the payment of fees and expenses.

HOUSING

All communications or inquiries concerning housing, applications, deposit fees, and rent payments in University Housing facilities should be sent to the *Director of Housing, University of Florida, Gainesville.* A student may make his own arrangements directly with the property-owner for off-campus accommodations in private housing.

FINANCIAL ASSISTANCE

Student Employment.—The faculty of the College of Law recommends that students refrain from taking part-time employment during the first two semesters of study except in cases of absolute necessity. Consult the University Catalog for information concerning part-time employment at the University.

Scholarships.—The following scholarship funds are available for law students:

James W. Day Scholarships.—An anonymous donor provides $500 annually for one or more scholarships for needy law students with good academic records. Preference is given to third year law students.

C. J. TeSelle Scholarships.—An anonymous donor provides $500 annually for one or more scholarships for needy law students with good academic records. Preference is given to third year law students.

Trial Court Scholarships.—The firm of Nichols, Gaither, Green, Frates and Beckham of Miami provides the sum of $350 annually for one or more scholarships for needy third year students. Preference is given to students who have shown a particular interest in and aptitude for trial court work.

Forms of application for these scholarships can be obtained from the chairman of the Scholarships and Awards Committee, College of Law.

Loan Funds.—The following loan funds are available to law students:

The LeRoy Franklin Lewis Memorial Loan Fund.—This fund was established through the will of the late Mrs. Catherine L. Thomas, of Pensacola, Florida, in memory of her father, the late LeRoy Franklin Lewis, formerly a practicing attorney in New York City. The loan fund is to be made available to upperclass students

to assist them in completing their legal, medical and theological training. First priority for loans will be given to law students. Forms of application can be obtained from the Chairman of the Scholarships and Awards Committee, College of Law.

The Senior Law Loan Fund.—This fund, available to needy seniors in the College Law, was established by the Law Class of 1938 and has been increased by subsequent gifts. Application should be made to the Dean of the College of Law.

Consult the University Catalog for information as to other loan funds which may be made available to law students.

SUMMER SESSION

The College of Law conducts a summer session for students who have had one or more semesters of law study. Beginning students are not admitted to the summer session. Detailed information as to dates and courses is given in the *Bulletin of the Summer Session* which is usually published in April.

The faculty of the College of Law feels that continuous law study throughout the year is undesirable except in cases where it is essential that a student accelerate his work, and therefore strongly urges students who have been in continuous attendance for two or more semesters not to attend the summer session.

REQUIREMENTS FOR DEGREES

All degrees are conferred by the Board of Control at regular commencement exercises. All candidates for degrees are required to be present at commencement exercises (Baccalaureate Sermon and Commencement Convocation). A student who fails to attend without being excused by the Board of Control will not have his degree conferred until he makes another application and complies with this requirement.

The Faculty of the College of Law will recommend for the degree of Bachelor of Laws (LL.B.) candidates who have complied with the following requirements:*

1. Completion with a passing grade of courses totalling at least 85 credits, of which at least 55 must have been completed in this College.
2. Maintenance of a 2.0 honor point average on all work attempted in this College.
3. Completion of at least 96 weeks of study in residence in an accredited law school of which at least 62 must have been in residence in this College. (In the case of a student admitted prior to September, 1953, completion of at least 90 weeks of study in residence at an accredited law school is required of which at least 56 must have been in residence at this College.)
4. Completion of the last 28 credits and the last 30 weeks of study in residence in this College, unless other arrangements are made in advance by written petition approved by the faculty of the College of Law.

In cases of superior scholarship and intellectual attainments the Bachelor of Laws degree may be recommended *With Honors* or *With High Honors.* Ordinarily, to be eligible for consideration for the degree of *Bachelor of Laws With Honors* the candidate must have maintained an honor point average of 3.0 on all work attempted, and to be eligible for consideration for the degree of *Bachelor of Laws With High Honors* the candidate must have maintained an honor point average of 3.5 on all work attempted which work must include Advanced Legal Research or Law Review.

*Students in attendance prior to February 4, 1950, or admitted with advanced standing prior to September, 1951, should consult the 1952-53 catalog for their graduation requirements.

STANDARDS OF THE AMERICAN BAR ASSOCIATION

The Council on Legal Education and Admissions to the Bar of the American Bar Association requests that attention be called to the Standards of the American Bar Association adopted in 1921 and by it recommended for enactment by all states. These Standards as amended provide in effect that every candidate for admission to the bar, in addition to taking a public examination, shall give evidence of graduation from a law school which shall require at least three years of acceptable college work as a condition of admission, and three years of law study (or longer if not a full-time course), which shall have an adequate library and a sufficient number of teachers giving their entire time to the school to ensure actual personal acquaintance and influence with the whole student body, and which shall not be operated as a commercial enterprise.

LIBRARY

The Law Library contains nearly 50,000 volumes and adds about 2,500 volumes a year. Its statutory material includes Federal statutes, statutes from all American states, and some foreign statutes. Its collection of published court reports includes those of the U. S. Supreme Court, the courts of last resort in all American states, selected state lower court reports, complete British reports, and many Canadian and other foreign reports. It subscribes to all leading American legal periodicals and to selected foreign one. It has numerous American and British legal encyclopedias, digests, texts, treatises, and other legal materials.

ORDER OF THE COIF

The College of Law has a chapter of The Order of the Coif, a legal scholarship society with chapters at the leading law schools of the country. The purpose of Coif is to foster a spirit of careful study and to mark in a suitable manner those who have attained a high level of scholarship. Election to the society is based on scholarship and character. To be eligible for consideration, a student must be in the upper ten per cent of his graduating class and be eligible for graduation with Honors.

UNIVERSITY OF FLORIDA LAW REVIEW

The *University of Florida Law Review* is published quarterly by the student Editorial Board assisted by the Faculty Advisors. Approximately half of the publication is written by the students, and the remainder, written by specialists in various fields, is selected and edited by the Editorial Board. Emphasis as to subject-matter is on Florida and federal law. The work furnishes intensive training in research, organization, analysis and style. Members of the Editorial Board are elected on the basis of scholarship and past performance of law review work. After the freshman year, credit can be obtained for work satisfactory to the Faculty Advisors.

STUDENT ORGANIZATIONS

The John Marshall Bar Association is the student bar association affiliated with The Florida Bar and open to all members of the student body. It arranges for prominent members of the Bar to address the law students, and has committees which advise with the faculty on matters of common interest such as curriculum and pre-law study.

Delta Theta Phi, Phi Alpha Delta, and Phi Delta Phi, national legal fraternities, and Phi Delta Delta, national legal sorority, have active chapters at the College.

PRIZES AND AWARDS

American Jurisprudence Awards.—The publishers of *American Jurisprudence* award a bound volume of an appropriate title from *American Jurisprudence* to the student making the highest grade in each class in the following courses: Business Organizations, Commercial Transactions I, Commercial Transactions II, Conflict of Laws, Contracts II, Creditor's Rights, Estates and Trusts I, Evidence, Fiduiciary Administration I, Insurance, Introduction to Equity, Introduction to Property, Introduction to Public Law, Labor Law, Mortgages, Municipal Corporations, Pleading and Jurisdiction, Private Corporations, Public Utilities, State and Local Taxation, United States and Florida Constitutional Law.

Appellate Moot Court Prizes.—The firm of Nichols, Gaither, Green, Frates & Beckham of Miami provides the sum of $150 annually to be distributed as prizes for students of this College who show the greatest aptitude in the appellate moot court program of the College.

Barnett National Bank of Jacksonville Will Drafting Contest.—The Barnett National Bank of Jacksonville sponsors a will drafting contest open to advanced law students. Prizes of $150, $100, and $50, respectively, are offered for the three best wills submitted in the contest.

Gertrude Brick Law Review Apprentice Prize.—Alumnus Albert Brick, in memory of his mother, has established a trust fund providing a prize of $25 to the *University of Florida Law Review* apprentice doing the best work in each of the regular semesters.

Bureau of National Affairs Award.—A prize of one year's subscription to *Law Week* is offered annually by the Bureau of National Affairs to the graduating student with a satisfactory law school record who makes the most significant scholastic progress in his senior year.

The Harrison Company First Year Award.—The Harrison Company annually awards *Adkins, Florida Criminal Law and Procedure,* to the student making the highest average in his first twenty-nine hours of law.

The Harrison Company Senior Award.—The Harrison Company annually awards *Adkins, Florida Criminal Law and Procedure,* to the senior law student doing all his work in this law school who makes the highest record during his law course.

Lawyers Title Insurance Corporation Award.—The Lawyers Title Insurance Corporation awards a $50 cash prize to the student in each February (or January) and June graduating class who has taken the following seven courses in the field of Real Property Law and who has the highest average in them: Introduction to Property, Estates and Trusts I, Acquisition of Real Property, Fiduciary Administration I, Future Interests, Abstracts and Mortgages. In the event of a tie in the average in the above courses, the courses of Estates and Trusts II, Estates Planning and Fiduciary Administration II will be taken into consideration in determining the highest average.

Lopez Law Review Contributor Award.—Alumnus Aquilino Lopez, Jr., Judge of the Circuit Court for the Sixteenth Judicial Circuit of Florida, provides an award of $50 each year to the outstanding contributor to University of Florida Law Review, based on work done otherwise than as a member of the Editorial Board.

Nathan Burkan Memorial Prize.—The American Society of Composers, Authors and Publishers each year awards cash prizes to students at this law school submitting the best essays on the subject of copyright law.

Phi Alpha Delta Award.—The Duncan U. Fletcher Chapter of Phi Alpha Delta Law Fraternity annually recognizes the senior law student or recent law graduate who during his stay at the law school has been most outstanding in service and leadership in law school activities. The award, known as The J. Hillis Miller Memorial Award, consists of a certificate given to the winner and the inscription of his name on an appropriate plaque.

Phi Delta Phi Award.—Cockrell Inn of Phi Delta Phi International Legal Fraternity annually recognizes the student who makes the highest average in his first two semesters at law school by inscribing his name on a scholarship plaque.

Redfearn Prize.—The Honorable D. H. Redfearn of Miami has offered a prize of $50 for the best essay by a law student on some topic of legal reform.

CHANGES OF RULES—OFFICIAL NOTICES

The privilege is reserved to modify, amend or revoke any rules or regulations set forth herein upon due notice posted upon the official bulletin board of the College of Law.

All students are held responsible for knowledge of all matters posted on the official bulletin board.

ATTENDANCE—RULES OF DISCIPLINE

Satisfactory law study cannot be done without regular class attendance. When a student has been absent from a course twice as many class hours as the number of credit hours assigned to the course, an absence warning notice will be sent to the student. A student will be dropped from a course with a failing grade after two unexcused additional absences following such a warning notice.

All students are admitted subject to the rules of the University of Florida relating to discipline and any amendments thereof.

REGISTRATION

Registration dates for other than beginning students are set forth in the University Calendar. Registration dates for beginning students will be established in accordance with the procedure set forth under the heading *Introductory Program for Beginning Students.* Dates for summer session registration are listed in the Summer Session Bulletin. *Students are responsible for registering on these specified dates.* Late registration fees will be charged for students registering any time after the specified registration period.

All students must adhere to the registration procedure as announced by the Office of the Registrar. This includes not only filing the prescribed forms at the designated places, but also payment of all fees.

Change of Registration.—A student is not permitted to drop a course, add a course, exchange one course for another, or change sections in the same course without the approval of the Dean and the presentation at the Office of the Registrar of the cards authorizing the change. An instructor will not admit a student to or drop him from any class except after notification on the proper form from the Registrar's Office. No student will receive credit for any course for which he is not properly registered. *Dates within which courses may be dropped or added are set forth in the University Calendar.* No changes can be made after these dates except by permission of the University Senate Committee on Student Petitions after formal petition.

Maximum and Minimum Load.—The minimum load during the first four semesters is as prescribed under the heading *Curriculum and Grades.* No fifth or

sixth semester student may register for less than 12 credits without permission from the Dean. No student may register in any semester for more than 16 credits without permission from the Dean.

Repeating Courses.—A student who has passed a course cannot repeat it. A student who has failed a course cannot repeat it, except that in exceptional circumstances, the Dean, in his discretion, may permit repetition of a failed course.

CURRICULUM AND GRADES

Program of Study.—The program of study contemplates six regular semesters of work beginning in the Fall semester of the academic year, although efforts are made to adjust the program to meet the needs of students entering in the Spring semester and those attending the Summer sessions.

For students entering in September, 1953, and thereafter, the following program of study is prescribed:

First Year

First Semester	Credits	Second Semester	Credits
LW. 401.—Contracts I	3	LW. 402.—Contracts II	2
LW. 403.—Criminal Law I	2	LW. 404.—Criminal Law II	2
LW. 405.—Introduction to Equity	2	LW. 406.—Introduction to Public Law	3
LW. 407.—Introduction to Judicial Administration	2	LW. 408.—Introduction to Legal Research & Writing	2
LW. 409.—Introduction to Property	3	LW. 410.—Estates & Trusts I	3
LW. 411.—Torts I	2	LW. 412.—Torts II	3
	14		15

Second Year

First Semester	Credits	Second Semester	Credits
LW. 501.—Commercial Transactions I	3	LW. 502.—Commercial Transactions II	2
LW. 503.—Business Organizations	3	LW. 504.—Private Corporations	3
LW. 505.—State and Local Taxation	2	LW. 506.—Estate & Gift Taxation	2
LW. 507.—Pleading & Jurisdiction	4	LW. 508.—Evidence	4
LW. 509.—Acquisition of Real Property	3	LW. 510.—Fiduciary Administration I	2
	15		13

Third Year

First Semester	Credits	Second Semester	Credits
LW. 605.—Income Taxation	2	LW. 606.—United States & Florida Constitutional Law	3
LW. 607.—Pre-Trial and Trial Procedure	2	LW. 608.—Conflict of Laws	3
LW. 609.—Future Interests	3	LW. 612.—Legal Ethics	1
Electives	7	Electives	7
	14		14

Electives.—LW. 690., Law Review, may be taken in the first semester of the second year and thereafter.

Electives in the 500 number group may be taken in the second semester of the second year or thereafter; other electives are limited to third year students.

For students entering prior to September, 1953, the first year of work is prescribed and work after the first two semesters is elective, except that all students are required to take LW. 612., Legal Ethics, in the fifth or sixth semester.

In exceptional cases the Dean may authorize deviations from the prescribed program of study.

Prerequisites for particular courses may be prescribed and the privilege is reserved by each member of the faculty to limit the number and to prescribe special qualifications for students in his courses and seminars.

The privilege is reserved to cancel any course or seminar when the registration for it does not warrant its being given in a particular semester.

Examinations.—In first semester courses mid-semester examinations are given for the primary purpose of acquainting students with law school examinations. Examinations are given at the end of each semester in most courses; in seminars and other advanced courses individual written work may be required in lieu of an examination.

Grading Scale.—Grades are given at the end of each semester in all work. Students' work is graded according to the following scale: A—excellent; B—good; C—satisfactory; D—poor; and E—failure. No numerical grades are given. Grades of I (Incomplete) and X (Absent from examination) are temporary grades, which must be changed to passing grades within the dates set in the University Calendar or be treated as grades of E in considering a student's record for graduation or in calculating averages. The grade of Ew is given when a student is dropped for non-attendance or unsatisfactory work.

Determination of Honor Point Average.—The honor point average is determined by computing the ratio of honor points to semester hours of work attempted. The student receives honor points according to the following scale: A equals 4 honor points per semester hour; B equals 3 honor points per semester hour; C equals 2 honor points per semester hour; D equals 1 honor point per semester hour; E (failure), or Ew (dropped for non-attendance or unsatisfactory work), or I (incomplete) or X (absent from examination) equals 0 honor point per semester hour.

Probation and Exclusion Rules.—University regulations provide that a student who fails fifty per cent or more of his work in any term or semester, will be suspended one semester for poor scholarship and will not be readmitted to the University until the lapse of one semester, except upon the approval of a formal petition to the Senate Committee on Student Petitions, and that a student who has been dropped once and in any subsequent period of attendance fails fifty per cent or more of his work, shall be suspended for poor scholarship and not be eligible for re-admission.

Students in the College of Law are subject to the University probation and exclusion rules. In addition to these rules, the following probation and exclusion rules are applicable to all students attending the College of Law:

A student who fails to maintain a 1.8 honor point average for all work attempted in any semester will be placed on probation for the next semester in which he is in attendance. A student on probation will be excluded at the end of the semester unless he maintains a 2.0 honor point average in all work attempted in that semester, or has a 2.0 cumulative honor point average in the total of all work attempted in the College.* A student excluded under this rule will not be readmitted except by special action of the faculty of the College of Law.

Grades of I and X will be considered as grades of E for the purpose of computing the honor point average under this provision until such time as they are changed to passing grades, at which time the honor point average will be recomputed on the basis of the permanent grades and the student restored to good standing, continued on probation, or immediately excluded as the application of the foregoing provision may require.

For the purpose of this provision a semester means either (1) the regular fall semester; (2) the regular spring semester; or (3) if summer session is attended, such session and the following regular semester attended, as a unit.

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*For exclusion rules applicable to students who entered the College prior to February, 1950, see 1952-53 catalog.

THE COLLEGE OF MEDICINE

GENERAL STATEMENT

Education in the scientific aspects of medicine is the aim of the College of Medicine. The establishment of the new College on the campus and within the framework of the University offers an unusual opportunity for many of the varied resources of the University to be applied to the training of physicians, scientists, and other personnel. The educational program will be directed primarly toward training for the most modern practice in the care of patients, but also will stress training for research and teaching in all health related fields.

Physical Plant

The various units of the physical plant have been designed to function as an integrated whole. The Medical Sciences Building has been completed, and teaching began in September, 1956. The building was designed to permit the most modern educational methods to be used in the training of medical students and scientists. The design is flexible so that the curriculum may gradually evolve with experience and the development of new knowledge. Classrooms and laboratories have been designed for teaching of students in small groups of sixteen or in multiples of this unit. The major teaching laboratories may be used for simultaneous instruction of the whole class or may be adapted to different uses by single groups.

The physical plant has been designed with the needs of the medical student in mind. The practice of medicine requires a never-ending process of self-education. This process involves the collection of observations and other data, critical evaluation of them, and intelligent use of conclusions in the planning of a program of patient care on an individual basis. In order to facilitate this pattern of reasoning and study, a unique study cubicle or "thinking office" has been designed and provided for each student from the day he enters the College of Medicine.

The design of the facilities for patient care has kept the needs of the student in mind and will reproduce the conditions under which patients are cared for in the local community. The Teaching Hospital and Clinics are under construction and are scheduled for completion during the 1958-59 academic year. These facilities will reproduce the elements of the hospital, home, and office so that the student may receive instruction on patients in all three situations. The ambulant patient care facilities, which include beds in a separate wing of the hospital and the outpatient clinics, offer unique educational opportunities. Particular emphasis has been given to the arrangement of the space provided for rehabilitation of acute and chronically ill patients.

Faculty

The faculty has been chosen on the basis of teaching ability and research potential. The individual members have been selected to bring together a young and enthusiastic faculty with widely varied backgrounds and interests. Particular attention has been given to the breadth of academic training with particular emphasis on the type of liberal arts background and general interests.

In order to encourage close student-faculty contacts, laboratory experiments have been planned for the student to work individually or in small groups of two or four. Within individual courses a high ratio of full time faculty to students has been maintained. To encourage informal contacts and discussions each student is assigned to a faculty member as a tutor or advisor. The physical plant in such areas as the general and departmental libraries, conference and seminar rooms, and student areas has been planned to encourage these contacts.

Florida State Scholarships

Ten scholarships are available annually to Florida citizens who have been admitted to a college of medicine. Each scholarship is for $1,000 a year and may be renewed. Awards are made on the basis of academic performance and financial need. Application forms may be secured from the State Board of Health, Post Office Box 210, Jacksonville, Florida.

Curriculum

The curriculum is designed to develop keen powers of observation, support critical evaluation of data, promote independent logical thinking and encourage warm attitudes toward people. The student will use these attributes for the rest of his professional life and will continue to build upon his basic knowledge regardless of the field of medicine which he ultimately chooses for his career. Teaching is directed toward an understanding of concepts, principles and methods rather than toward an accumulation of facts. Courses have been related to each other and the content of individual courses has been arranged insofar as possible from an interdisciplinary approach. Correlation has been planned from the beginning between the basic scientific disciplines and between the basic medical sciences and clinical disciplines.

The curriculum is arranged so that students interested in a career in medical teaching and research may elect to work toward a Doctor of Philosophy degree in Medical Sciences. The training for this degree is planned from an interdisciplinary point of view but with a major in the basic medical science of anatomy, biochemistry, microbiology or physiology. The minor may be elected in any basic scientific discipline approved for graduate study in the University outside of the College of Medicine or in one of the basic medical sciences including pharmacology and pathology.

Students

The practice of medicine is an art which applies scientific tools and methods to the study of an individual patient. This close inter-personal relationship is highly confidential and requires one individual to place great trust in another. Students must have personal qualities of a high order — character, integrity, intellectual honesty, responsibility, maturity, initiative and aptitude. In addition to these personal characteristics, he must have demonstrated superior intellectual achievement. The quality of the academic background and the proved willingness to approach his maximum potential performance will be weighed along with extra curricular activities and other interests. A genuine interest in human welfare is important.

Continuing Education

The College of Medicine will be responsible academically for the postgraduate training program of the Teaching Hospital. The internship and residency programs will be supervised by the faculty.

The physical plant provides space both in the Medical Sciences Building and Teaching Hospital for continuing education of practicing physicians. A senior faculty member has postgraduate education as his primary educational responsibility. Physicians may attend teaching exercises on an informal basis at any time and are welcome to use the Library or other facilities of the College. Organized postgraduate courses are planned for the campus at Gainesville and may be continued in other parts of the state. This postgraduate program has been in operation as a function of the University for many years in conjunction with the Florida Medical Association and Florida State Board of Health.

ADMISSION REQUIREMENTS

A well-rounded liberal education is an essential background for the study of medicine. The impact of disease on the family and the role of the physician in achieving optimum adjustment of the patient in the community requires a broad cultural background with knowledge of social and behavioral factors as well as technical training in professional skills. Concentration on the physical and biological sciences in the preprofessional curriculum is not necessary, though a minimum number of science courses is required for admission. It is preferable that the student blend courses in many of the arts and humanities with the minimal core of the sciences.

Development of efficient methods of study and effective powers of reasoning is essential. It is more important for the student to have knowledge of and working familiarity with basic concepts and theories than to have developed manual proficiency in scientific techniques. The rapid rate of scientific progress in medicine requires that the student show steady growth intellectually and personally and that he continue this growth throughout this period of preprofessional and professional training. The selection of courses and activities for the particular student to achieve these ends and to develop intellectual maturity and judgment should be planned in cooperation with the student's preprofessional advisor at his own particular college. Advice to the prospective student or his counsellor will be gladly given by the College of Medicine.

Students intending to apply for admission should complete the requirements for a bachelor's degree. A limited number of exceptional students upon whom the degree may not have been conferred by the time of entrance into medical school may be considered for admission at the end of their third year in college.

The College admits a limited number of out-of-state students of proved superior ability. The number admitted will vary from year to year but will follow the proportion of non-resident students in the University.

Students who have failed academically or are ineligible to continue in a medical or other professional school will not be admitted.

No transfer students will be accepted for advanced standing in work leading to the M.D. degree. Graduate students in the basic medical sciences may apply through the Graduate School.

Specific Courses

The requirements for basic scientific knowledge are intended to give the student working familiarity with general principles rather than excellence in performing techniques. The quality of the courses taken to satisfy the minimum requirements for admission and the performance of the student in them will be weighed more heavily than the total number of science courses taken. Unless specified to complete the requirement for a degree in his own college, courses which will be repeated in the medical curriculum in more exhaustive fashion should not be selected. The number of hours and the content of courses in the preprofessional curriculum will vary from one college to another but in general the minimum required material will be covered in courses which total the following number of hours. Laboratory work must be included in each of the disciplines.

Biology, 8 semester hours.—Medicine is concerned predominantly with abnormalities and disease in a single species and is essentially a study of human biology. Concepts such as the inherent variability of all living things, including man, and their adaptability to physical and biological factors in the environment form a basic background for the study of medicine. To understand natural laws which govern biologic

phenomena and to meet scientific criteria in their derivation, the study of groups of individuals is essential. In this fashion variation between individuals is taken into account and the normal state is found not to be a fixed point but to cover a range. Variability finds expression in genetic laws of transmission of inheritable characteristics and in developmental abnormalities of embryonic life. The principle of probability in distribution of individuals in a variable group is also taught in mathematics through statistical techniques. These biologic concepts are also taught in the social sciences.

The minimal requirement of general biology and laboratory may be sufficient if adequate skill in techniques of dissection and use of the microscope are attained and if the work is properly supplemented by study in related fields. Courses in comparative anatomy, embryology and genetics illustrate additional important principles and help to round out the student's background.

Chemistry, 16 semester hours.—The study of inorganic chemistry should cover the properties of elements in relation to their atomic structure and molecular arrangement and the effect of physical properties of chemical compounds on the principle of dynamic equilibrium. A year of organic chemistry is required and should cover the organization of elements into chemical groups or compounds which are frequently involved in biologic reactions.

The technique of qualitative analysis demonstrates the solution of a problem by systematic, logical, step-by-step determination of the component parts of an unknown compound. Similar methods of reasoning are taught in mathematical subjects, such as algebra. Quantitative techniques are used in medicine but the basic principle concerned is the recognition that every human endeavor has an inherent error which must be estimated and evaluated. This concept is also taught in other physical sciences as well as in the biological and behavioral sciences.

Courses which cover the elements of physical chemistry and include material on solutions, colloids, gases, thermodynamics, equilibrium, kinetics and pH help to round out the student's basic information.

Physics, 8 semester hours.—The elements of mechanics as shown in the action of forces through levers and the performance of work in the exchange of forms of energy should be understood. The concept of the range of electromagnetic radiations from infra-red through visible light to x-rays and waves of other length should be grapsed in relation to heat, sound and optics. The basic principles of the generation, conduction and measurement of electrical forces should be comprehended.

Other courses apply the same habits of quantitative scientific thought to the understanding of physical phenomena in the environment. Familiarity with the use of the slide rule and calculator simplifies the performance of mathematical tasks and helps in the application of statistical principles.

Elective Courses

The remainder of the college work should be distributed throughout various courses in the humanities or social, biological and behavioral sciences. The student should select subjects which intellectually stimulate him, challenge him to a maximum performance and contribute to his development as a well-rounded balanced individual. The courses may aim toward a thorough study of a single area with a general background in many areas or may group in several related areas in the sciences or humanities. The discriminate selection by the student of elective courses which not only increase his store of knowledge but form attitudes basic to a professional career will help him to adjust to society for the practice of his art.

Knowledge of basic concepts and development of useful skills in the following arts will place the student at ease in a professional school.

Intellectual Habits.—Discipline in study is essential. Efficient skill in accurate, rapid, interpretative reading should be mastered. Methods of observation and collection of data, evaluation, deduction and interpretation of findings are taught in psychology, physics and other sciences. The analysis and organization of a set of observations into its simple components and the synthesis of many fragments of data into a working hypothesis on which a plan of action can be based is taught in many courses. The student should keep these objectives in mind throughout his preprofessional training.

Communication.—A high degree of skill in the use of spoken and written language should be developed accurately to extract a story, systematically to record the facts for the use of others, and precisely to transmit instructions. These techniques are taught in courses in English literature and composition. The study of foreign languages also illustrates the exact meaning of words and the use of subtle differences in shading. Communication through symbols is taught in chemistry, physics and mathematics. Proficiency in typing increases the speed and accuracy of communication and will aid the student in his professional work.

Understanding of People.—Medicine deals with individuals who react to the physical and cultural circumstances of their environment. Each person is endowed with both physical (somatic) and mental and emotional (physic) components. The inherent complement of these factors in the individual can be measured by appropriate techniques. Functional derangements induced by the interplay of physical and emotional factors in the individual or by external influence from the environment can be detected by subtle methods. Individuals are rarely isolated in society but react in the framework of a family or other social group. The study of social forces which may affect a person is taught in history, literature, economics, sociology and law. The study of emotional factors is taught in philosophy, religion, psychology and the fine arts.

Additional Requirements

1. An acceptable score on the Medical College Admissions Test. The applicant should have taken the test by the spring preceding the submission of his application.
2. A personal interview after preliminary screening and before final acceptance. The time of the interview will be arranged by the College with the applicant.
3. Each application must be accompanied with a fee of $10.00 which is not refundable.

APPLICATION PROCEDURE

Application forms may be obtained from the office of the Registrar. The applicant must furnish all information requested and arrange to submit academic credentials. After a review of these data certain applicants will be selected for interview. The College welcomes the opportunity to meet and talk with the wife of a married student at the time of interview or later. It is anticipated that some applicants will be tentatively accepted while still pursuing college work which will complete their requirements for admission. Such tentative selection will be final if the student satisfactorily completes his program.

Dates of Application.—Students may apply for admission to the class entering in the fall of 1958 after July 1, 1957. Applications should be complete by October, 1957; later applications may be considered until the class has been filled.

CURRICULUM

The curriculum which follows is tentative and represents the present stage in its evolution.

CURRICULUM FOR THE DEGREE DOCTOR OF MEDICINE

First Year

First Semester	Credits	Second Semester	Credits
MED 511 Biochemistry	8	MED 522 Human Physiology	8
MED 501 Gross Anatomy	5	MED 502 Gross Anatomy	5
MED 503 Microscopic Anatomy	4	MED 504 Neuroanatomy	4
MED 531 Introduction to Medicine	2	MED 532 Introduction to Medicine	2
	19		19

Second Year

First Semester	Credits	Second Semester	Credits
MED 551 Microbiology	8	MED 560 Pharmacology	6
MED 561 General Pathology	7	MED 562 Systemic Pathology	4
MED 533 Introduction to Medicine	4	MED 570 Experimental Medicine	5
	19	MED 534 Introduction to Clinical Methods	6
			21

Third Year

First Semester	Credits	Second Semester	Credits
MED 581 Basic Clinical Clerkship	10	MED 584 General Outpatient Clerkship	18
MED 583 Introduction to Ambulant Medicine	10	One Approved Elective	4
MED 567 Therapeutics	2		22
	22		

Fourth Year

Courses taken in rotation to balance ward loads.

First Semester	Credits	Second Semester	Credits
MED 585 Special Ward Clerkship	18	MED 586 Special Ward Clerkship	10
Medical		MED 587 Preceptorship	6
Obstetrical		Two Approved Electives	6
Pediatric			22
Psychiatric			
Surgical			
Two Approved Electives	4		
	22		

Grades.—The following grades are given: S—superior performance with distinction; P—pass with satisfactory performance; U—unsatisfactory performance.

Promotion.—The Committee on Academic Status will recommend to the Dean at the end of each semester the continuation or exclusion of each student on the basis of over-all performance. A grade of U will require the student to repeat the course or satisfactorily to complete requirements specified by the Committee on Academic Status. A student receiving one or two grades of U in one semester may be allowed to continue at the discretion of the Committee on Academic Status. More than one U renders the student ineligible for employment or other privileges the following semester. Three grades of U in one semester will automatically exclude a student from continuing in the College.

Appeals on grades or decisions of the Committee on Academic Status may be made by the student through the Dean to the Executive Committee of the Faculty of the College of Medicine whose decision will be final.

COLLEGE OF NURSING

GENERAL STATEMENT

The establishment of the College of Nursing within the framework of the new J. Hillis Miller Health Center at the University of Florida offers a unique opportunity to provide collegiate and professional training for nurses in a university setting.

The four-year program includes both general education in the University of Florida and professional preparation in the Health Center. Upon satisfactory completion of the program, the graduate will be awarded a Bachelor of Science in Nursing and is then eligible for the State Board of Nursing examination for state licensure as a Registered Nurse. During these four years, the student may live in the modern dormitories provided for students on campus and can participate in the many cultural and recreational campus activities as do other students.

The clinical and professional part of the nursing program will be taught in the Teaching Hospital of the J. Hillis Miller Health Center. The new Teaching Hospital, which will be completed by the fall of 1958, will also provide clinical training for physicians, scientists, pharmacists and other personnel in the health related fields. It will house an outpatient clinic, an ambulatory wing, a psychiatric unit and a hospital wing for seriously ill patients. With these comprehensive and modern facilities, the student will have opportunities for supervised observation and practice in all phases of patient care. Other patient facilities, such as public health agencies, will also be used to prepare students for beginning professional nursing positions in hospitals, public health and other community agencies. For supervisory, teaching or administrative positions, the graduate of the College of Nursing will have a Bachelor of Science degree which is the first step toward an advanced education.

CURRICULUM

The four-year program in the College of Nursing is divided into two divisions. During the first two years in the University College, or lower division, instruction is centered around the comprehensive courses to give the student a full, rich background for citizenship and a professional career.

The following two years in the College of Nursing, or upper division, composes the professional part of the program and offers courses specifically related to the art and science of nursing. The University Teaching Hospital will be used as the primary training resource, and with the exception of Nursing 101, all nursing courses require supervised observation and practice in the care of patients.

First Year

First Semester	Credits	Second Semester	Credits
C-11 American Institutions	4	C-12 American Instutions	4
C-21 The Physical Sciences	3	C-32 Reading, Speaking and Writing	4
C-31 Reading, Speaking and Writing	4	C-42 Fundamental Mathematics	3
C-41 Practical Logic	3	C-61 Biological Science	3
NSG-101 Introduction to the Nursing Profession	3	NSG-111 Introduction to Nursing Functions	3
Physical Education	0	Physical Education	0
	17		17

Second Year

First Semester	Credits	Second Semester	Credits
C-51 The Humanities	4	C-52 The Humanities	4
C-22 The Physical Sciences	3	C-62 Biological Science	3
FAM-213 The Child in the Home	3	FAM-150 Nutritive Requirements for Health	2
BCY-300 Bacteria in Everday Life	3	NSG-230 Medical and Surgical Nursing	8
NSG-221 Nursing Skills Laboratory	4	Physical Education	0
Physical Education	0		17
	17		

Third Year

First Semester	Credits	Second Semester	Credits
NSG-331 Maternal and Child Health	8	EDF-442 Educational Psychology	3
PHA-376 First Aid and Injuries	2	NSG-334 Communicable Disease Control	2
Approved Electives	6	NSG-332 Nursing the Sick Child	4
	16	ART-123 Color and Design	3
		Approved Electives	6
			18

Fourth Year

First Semester	Credits	Second Semester	Credits
NSG-441 Public Health Nursing	8	NSG-451 Psychiatric Nursing	6
NSG-443 Public Health Administration	3	NSG-461 Team Nursing Laboratory	4
NSG-445 Nursing Aspects of Gerontology	3	NSG-471 Senior Seminar in Nursing and Related Fields	3
	14	NSG-481 Nursing in Medical and Surgical Specialities	3
			16

Recommended Electives: APY 201, 301, 503; EDF 440; FAM 301; PPY 311, 312, 313; RN 251, 252; SCH 201, 314; SY 244, courses in psychology and literature.

COLLEGE OF PHARMACY

GENERAL STATEMENT

The College of Pharmacy, a unit in the J. Hillis Miller Health Center, meets the highest requirements of pharmaceutical instruction in this country. The College is accredited by the American Council on Pharmaceutical Education with a Class A rating and therefore receives recognition for its courses from all state boards requiring graduation from an accredited college of pharmacy as a prerequisite for examination and registration. The College is a member of the American Association of Colleges of Pharmacy and complies with its educational requirements.

Senior students are given complimentary memberships in the Florida State Pharmaceutical Association.

The curriculum is designed to provide a systematic course of instruction in those subjects which are essential for the successful practice of pharmacy in drugstores and hospital pharmacies. The courses provide a foundation for additional study to qualify one more fully to work in laboratories in the pharmaceutical, chemical, biological, and cosmetic industries. The curriculum furnishes a basis for training for analysis and inspection of food, drug, and cosmetic products. Graduates are in demand for sales work with wholesale and manufacturing pharmaceutical firms. Pharmacists are eligible for a limited number of commissions in the U.S. Public Health Service, the Army, the Navy, and the Air Force.

The College of Pharmacy is housed in Leigh Hall. The equipment includes pharmaceutical machinery for manufacturing medicinal products on a pilot-plant scale and modern facilities for undergraduate and graduate work in pharmacy, pharmaceutical chemistry, pharmacology, and pharmacognosy.

A ten-acre tract is used by the College of Pharmacy for a medicinal plant garden. This teaching adjunct is a source of supply of fresh material for study, investigation, and classroom illustration.

The Chemistry-Pharmacy branch of the main library is housed in Leigh Hall. The library includes text and reference books and many American and foreign periodicals on chemical, pharmaceutical, and medical subjects.

The Bureau of Professional Relations was established in 1940 and is partially financed by an annual grant of $5,000 from the Florida State Board of Pharmacy. It actively assists in solving mutual problems of physicians and pharmacists. The work is approved by the Florida Medical Association and the Florida State Pharmaceutical Association. Many thousands of pieces of informative professional literature are mailed each year to both professions.

Students in the University College who plan to major in pharmacy are urged to confer with any of the members of the faculty of the College of Pharmacy regarding their problems.

REQUIREMENTS FOR ADMISSION

(a) Graduation from the University College or its equivalent as determined by the Board of University Examiners, (b) recommendation of the Board of University Examiners, and (c) approval of the Dean of the College of Pharmacy.

Students in the Lower Division planning to study pharmacy are advised to follow the program of study outlined under University College. Only students having an average of C or higher will be admitted to the College of Pharmacy and/or pharmacy courses in the Upper Division. In addition, all pre-pharmacy students must have grades of C or higher in each of the following courses: C-42, CY. 121, CY. 122, PHY. 106, PGY. 221, PGY. 222, PHY. 223, PHY. 224.

RESIDENCE REQUIREMENT

In keeping with the requirement of the American Council on Pharmaceutical Education and the American Association of Colleges of Pharmacy all students expecting to earn the degree of B.S. in Pharmacy must be enrolled in one or more Pharmacy courses for a minimum of three academic years or a total of twenty-seven months. This regulation applies regardless of the number of studies completed in other fields.

GRADUATION WITH HONORS

To graduate *With Honors,* a student must have graduated from the University College *With Honors* and earn an honor point average of at least 3.0 in the work of the Upper Division or in lieu of graduation from the University College *With Honors* earn an honor point average of at least 3.2 in the work of the Upper Division.

To graduate *With High Honors,* a student must meet the requirements for graduation *With Honors* and be recommended for graduation *With High Honors* by the faculty.

BACHELOR OF SCIENCE IN PHARMACY

The Degree of Bachelor of Science in Pharmacy is awarded on completion of the curriculum as outlined below. Opportunity for some specialization is offered by the proper selection of the elective courses in the senior year.

MASTER OF SCIENCE IN PHARMACY

Courses are offered in the Graduate School leading to the degree of Master of Science in Pharmacy.

For requirements for the Master's Degree, see Graduate School.

DOCTOR OF PHILOSOPHY

Courses are offered in the Graduate School leading to the degree of Doctor of Philosophy with majors in pharmaceutical chemistry, pharmacy, pharmacognosy, and pharmacology.

CURRICULUM

To be eligible for the degree of Bachelor of Science in Pharmacy all requirements of the curricula for pharmacy students in both the University College and the College of Pharmacy must be completed. For example, if Pharmacy 223-224, Pharmacognosy 221-222, or PS. 201-202, 207-208 are not completed in the University College, these courses must be completed after admission to the College of Pharmacy. However, in such cases these courses may be taken in lieu of an equal number of hours of options.

For all students a grade of C or higher is required in each semester of Pharmacy 461-462. An average of C or higher must be obtained in all courses required for a degree. Curriculum to be followed by students in the Upper Division:

Junior Year

First Semester	Hours
PLY. 301—Applied Anatomy for Pharmacists	4
PHY. 311—Inorganic Pharmacy	4
PHY. 315—History and Ethics of Pharmacy	2
CY. 362-363—Organic Chemistry	5
ATG. 211—Elementary Accounting	3
	18

Second Semester	Hours
PLY. 302—Applied Physiology for Pharmacists	4
PHY. 374—Commercial Pharmacy	5
PCY. 355—Organic and Analytical Pharmaceutical Chemistry	5
BCY. 305—Basic Introductory Bacteriology	3
BCY. 307—Introductory Bacteriology Laboratory	1
	18

Senior Year

First Semester	Hours
PHY. 461—Prescriptions and Dispensing	4
PHY. 455—Pharmaceutical Specialities	3
PLY. 405—Introductory Pharmacology	3
PHY. 481—Pharmacy Laws	2
PCY. 356—Organic and Analytical Pharmaceutical Chemistry	5
	17

Second Semester	Hours
PHY. 462—Prescriptions and Dispensing	4
PHY. 456—Pharmaceutical Specialities	3
PLY. 406.—Pharmacology	5
Approved Electives	6
	18

Approved electives may be taken in cultural subjects, the sciences, and business administration. For further advice consult the Dean of the College of Pharmacy.

COLLEGE OF PHYSICAL EDUCATION AND HEALTH

GENERAL STATEMENT

The College of Physical Education and Health offers programs of instruction and services under five departments, namely, Health Service, Intramural Athletics and Recreation, Required Physical Education for Men, Required Physical Education for Women, and The Professional Curriculum.

THE PROFESSIONAL CURRICULUM

The Department of The Professional Curriculum offers programs of study leading to appropriate undergraduate degrees in the areas of Physical Education, Health Education, Recreation, and Physical Therapy. The course requirements for each of the several curricula will be found on the following pages. Each curriculum is designed to prepare students for various professional positions. These positions are described in the introductory paragraphs of the several curricula. The requirements of the several undergraduate curricula are organized on the basis of the Lower Division and the Upper Division. Courses basic to each of the several curricula are offered in the University College and are required for admission to full standing in the College of Physical Education and Health. Programs of graduate study are also offered by this department leading to the degree Master of Physical Education and Health.

ADMISSION REQUIREMENTS

1. Requirements for students entering The Professional Curriculum of the College of Physical Education and Health from the *University College.*

a. Present a certificate of graduation from the University College or its equivalent.

b. Complete, with a passing grade on each, all required University College courses (C-1, C-2, C-3, C-41, C-42, C-5 and C-6 or satisfactory substitutes therefor.)

c. Complete, with a passing grade, the specified professional foundation courses for the curriculum of the student's choice (see curriculum below) during the freshman and sophomore years in the University College.

d. Present an academic average of 2.0 covering all work in the Lower Division.

e. Have the approval of the Committee on Admissions of the College.

2. Requirements for transfer students entering from *other institutions*:

Meet the above requirements or the equivalent, as determined by the Board of University Examiners and have the approval of the Committee on Admissions of the College of Physical Education and Health. Transfer and acceptance of credits from other institutions are handled through the Office of the Registrar.

3. The Committee on Admissions of the College of Physical Education and Health will consider requests for admission from students who do not meet the conditions stated above. Admission without the required 2.0 academic average, however, will be approved only in exceptional cases.

THE ADVISORY PLAN

All students in the College of Physical Education and Health are provided with an advisor selected from the faculty. The purpose of the advisory plan is to make available an understanding and sympathetic counselor to whom the student may turn for assistance in solving any of his problems. The student is advised on such matters as (1) selection of courses in the area of specialization and approved electives, (2) participation in extra-curricular activities, (3) scholastic difficulties, (4) obtaining non-curricular experiences of professional value, and (5) acquiring and developing desirable

qualities of leadership and personality. Records of a student's progress will be kept by the advisor for purposes of guidance and placement upon graduation.

The Department of The Professional Curriculum maintains an undergraduate counseling office and a graduate counseling office. A student planning to pursue any one of the several undergraduate or graduate curricula in the College of Physical Education and Health should request the assignment of an advisor as early as possible in his university program. Further information may be obtained from the Office of the Head of the Department of the Professional Curriculum, Florida Gymnasium, Room 302.

PLACEMENT SERVICE

The College of Physical Education and Health operates a Placement Service for graduates and former students. All practical and desirable steps are taken to place graduates of the College in available and suitable positions. Persons who wish to avail themselves of this service should communicate with the Chairman of Placement Service, Room 302, Florida Gymnasium.

TEACHERS' CERTIFICATES

Graduates of the College of Physical Education and Health are granted certificates by the State Department of Education without further examination provided they have complied with the regulations of the State Board of Education covering the certification of teachers. These regulations are fully described in a bulletin on the certification of teachers, published by the State Department of Education in Tallahassee. It is imperative that students who expect to be certified familiarize themselves with these regulations. A copy of these regulations is available in the office of each student's advisor. Applications for the certificate should be made immediately after graduation and should be addressed to the State Department of Education, Tallahassee, Florida.

INTERNSHIP PROGRAM

Students enrolled in the Physical Education, Health Education and Recreation curricula offered in this College are required to register for the internship program for one semester during their senior year. This program is required of students for certification by the State Department of Education unless the applicant has had several years of successful teaching experience. The student will be expected to live in the community in which he serves his internship.

RESEARCH

In order to better carry out its role in research, the College of Physical Education and Health conducts, coordinates, and encourages research through its Research Council. The facilities of the Research Laboratory are available to faculty and staff members, as well as to graduate students in the College of Physical Education and Health, for investigational work. Further information may be obtained from the Chairman, Research Council, College of Physical Education and Health.

GENERAL REGULATIONS

University Student Regulations: The STUDENT REGULATIONS section of this catalog contains information of essential importance to all students. The regulations cover such points as (1) residence requirements, (2) attendance at Commencement, (3) maximum and minimum load, (4) amount of extension work permitted, (5) attendance at classes, and (6) suspension for poor scholarship.

Student Responsibility: The student must assume full responsibility for registering for the proper courses and for fulfilling all requirements for his degree. The faculty and the student's advisor will assist and counsel, but the student must take the initiative and assume responsibility for meeting all requirements.

The student's program of studies is subject to the approval of his advisor and the head of Department of The Professional Curriculum.

Each student is responsible for completing all courses for which he is registered. Courses can be dropped or changed without penalty only through the approval of the student's advisor.

Seniors must file formal application for degree in the Office of the Registrar and must pay the graduation fee early in the semester in which they expect to receive the degree; the official calendar in the catalog shows the latest date on which this can be done.

Student Petitions: If a student feels that the College regulations work a peculiar hardship or injustice in his case, he may petition for waiver of the regulation involved. Information on the procedure to be followed in submitting such petitions may be secured from the student's advisor.

UNDERGRADUATE DEGREES

The College of Physical Education and Health offers four undergraduate degrees: The Bachelor of Science in Physical Education, The Bachelor of Science in Health Education, The Bachelor of Science in Recreation, and The Bachelor of Science in Physical Therapy.

A student is required (1) to complete one of the curricula offered in this college; (2) to complete 66 semester hours in the Upper Division (60 semester hours for Physical Therapy) with an average of 2.0 or higher; (3) to complete 130 semester hours for the four-year period (124 semester hours for Physical Therapy) with an average of 2.0 or higher; and (4) to complete the course requirements in his major field with an average of 2.0 or higher.

In addition to completing the above requirements, the student must have earned four *Activity Units* in approved extra-curricular activities. Experience shows that men and women are called on to perform many and varied services in their respective schools and communities. Participation in extra-curricular activities while in college contributes substantially to the success of persons entering the profession. Information concerning this requirement may be secured from the student's advisor.

GRADUATION WITH HONORS AND HIGH HONORS

A student who has completed the work of the Upper Division with a minimum honor point average of 3.2 or higher is eligible for consideration for graduation *With Honors* or *With High Honors*. Graduation *With Honors* or *With High Honors* is not determined solely on the basis of the Upper Division honor point average. Recommendation of the faculty is necessary. A student may consult his advisor for policies governing faculty recommendations.

GRADUATE DEGREE

Courses are offered by this College in the Graduate School leading to the degree of Master of Physical Education and Health with a major in physical education. Admission and degree requirements for graduates of accredited institutions are described under the Graduate Division section of this Catalog.

CURRICULA

1. Curriculum in Physical Education for Men

Leading to the Degree of Bachelor of Science in Physical Education

This curriculum is designed to prepare students (1) to become teachers of physical education in schools and colleges; (2) to coach athletic teams; (3) to become directors

of intramural and interscholastic athletic programs; (4) to serve in the school-community recreation program. Since many men are expected to teach more than one subject, the approved elective hours should be used to complete certification requirements in a second teaching field.

Admission: To register for this curriculum students must have completed the following courses while registered in the University College:

PHA. 251.—Folk, Social and Tap Dance, 2 credits
PHA. 283.—Track and Baseball, 2 credits
PHA. 284.—Team Games for Men, 2 credits
PHA. 287.—Gymnastics for Men, 2 credits
PHA. 291.—Principles of Physical Education, 3 credits
EDF. 245.—Aspects of Human Growth and Development, 3 credits

Junior Year

First Semester	Credits
PHA. 281—Football	2
PHA. 285—Individual and Dual Sports for Men	2
PHA. 325—Conduct of Playgrounds and Indoor Centers	3
PHA. 376—First Aid and Injuries	2
EDF. 225—Children and Culture	3
Second Teaching Field Electives	5
	17

Second Semester	Credits
PHA. 282—Basketball	2
PHA. 286—Aquatics for Men	2
PHA. 315—Applied Anatomy and Physiology	3
PHA. 373—Teaching Physical Education in the Elementary School	3
Second Teaching Field Electives	7
	17

Senior Year

EDS. 300—The Secondary School Program	3
EDE. 400—Problems of Instruction	3
PHA. 363—Teaching Physical Education in the Secondary School	3
PHA. 375—Adapted Physical Education	2
PHA. 441—Administration of Physical Education and Athletics	3
Second Teaching Field Electives	3
	17

EDS. 405—Intern Teaching in the Secondary School	15
	15

II. Curriculum in Physical Education for Women

Leading to the Degree of Bachelor of Science in Physical Education

This curriculum is designed to prepare students (1) to become teachers of physical education in schools and colleges; (2) to coach sports; (3) to direct intramural programs; (4) to serve in school-community recreation programs. Since many women are expected to teach more than one subject, the approved elective hours should be used to complete certification requirements in a second teaching field.

Admission: To register for this curriculum students must have completed the following courses while registered in the University College:

PHA. 251—Folk, Social and Tap Dance, 2 credits
PHA. 252—Modern Dance, 1 credit
PHA. 253-254—Team Sports for Women, 2-2 credits
PHA. 255—Individual and Dual Sports for Women, 2 credits
PHA. 256—Swimming and Diving for Women, 1 credit
PHA. 257—Gymnastics for Women, 1 credit
PHA. 258—Tennis and Golf for Women, 2 credits
PHA. 291—Principles of Physical Education, 3 credits
EDF. 245—Aspects of Human Growth and Development, 3 credits

Junior Year

First Semester	Credits	Second Semester	Credits
PHA. 305—Teaching and Officiating Team Sports for Women	2	PHA. 306—Teaching and Officiating Team Sports for Women	2
PHA. 307—Teaching of Folk, Social and Tap Dance	2	PHA. 308—Teaching of Modern Dance	2
PHA. 315—Applied Anatomy and Physiology	3	PHA. 325—Conduct of Playgrounds and Indoor Centers	3
PHA. 373—Teaching Physical Education in the Elementary School	3	PHA. 375—Adapted Physical Education	2
EDF. 225—Children and Culture	3	PHA. 376—First Aid and Injuries	2
Second Teaching Field Electives	4	Second Teaching Field Electives	6
	17		17

Senior Year

PHA. 363—Teaching Physical Education in the Secondary School	3	EDS. 405—Intern Teaching in the Secondary School	15
PHA. 441—Administration of Physical Education and Athletics	3		15
EDS. 300—The Secondary School Program	3		
EDE. 400—Problems of Instruction	3		
Second Teaching Field Electives	5		
	17		

III. Curriculum in Health Education

Leading to the Degree of Bachelor of Science in Health Education

This curriculum is designed to prepare students (1) to become teachers of health education in schools and colleges; (2) to serve as coordinators of school health education programs; (3) to serve as health educators in state and county departments or voluntary health agencies; (4) to qualify for entrance into approved schools of public health for graduate work in health education. Since many teachers of health education are expected to teach more than one subject, the approved elective hours should be used to complete certification requirements in a second teaching field.

Admission: To register for this curriculum students must have completed the following courses while registered in the University College:

CY. 121-122—General Chemistry, 4-4 credits
PHA. 261—Personal Hygiene, 3 credits
EDF. 245—Aspects of Human Growth and Development, 3 credits
EDF. 225—Children and Culture, 3 credits
SY. 201—Sociological Foundation of Modern Life, 3 credits
SY. 244—Marriage and the Family, 3 credits

Junior Year

First Semester	Credits	Second Semester	Credits
PHA. 262—Community Hygiene	3	PHA. 315—Applied Anatomy and Physiology	3
PHA. 361—Elementary School Health Program	3	PHA. 362—Secondary School Health Program	3
PHA. 369—School Safety Education	2	PHA. 421—Driver Education and Traffic Safety	3
BLY. 161—Biology Laboratory	2	BLY. 162—Biology Laboratory	2
Approved Electives	7	Approved Electives	6
	17		17

Senior Year

PHA. 376—First Aid and Injuries	2	EDS. 405—Intern Teaching in the Secondary School	15
BCY. 305—Basic Introductory Bacteriology	3		15
BCY. 307—Introductory Bacteriology Laboratory	1		
EDE. 400—Problems of Instruction	3		
EDS. 300—The Secondary School Program	3		
Approved Electives	5		
	17		

IV. Curriculum in Recreation

Leading to the Degree of Bachelor of Science in Recreation

This curriculum is designed to prepare students to become leaders or directors of community recreation, industrial recreation, summer camps, playgrounds, youth organizations, or state and federal recreation services.

Admission: To register for this curriculum students must have completed the following courses while registered in the University College:

PHA. 251—Folk, Social and Tap Dance, 2 credits
PHA. 253—Team Sports for Women, 2 credits; or PHA. 284—Team Games for Men, 2 credits
PHA. 255—Individual and Dual Sports for Women, 2 credits
PHA. 258—Tennis and Golf for Women, 2 credits; or PHA. 283—Track and Baseball for Men, 2 credits
EDF. 245—Aspects of Human Growth and Development, 3 credits
SY. 201—Sociological Foundation of Modern Life, 3 credits
IN. 330—Elementary School Handcrafts, 3 credits

Junior Year

First Semester	Credits
PHA. 285—Individual and Dual Sports for Men, or PHA. 256—Swimming and Diving for Women	2-1
PHA. 322—Camp Programs and Counselor Training	3
SCH. 201—Effective Speaking	3
MSC. 160—Music Skills	3
Approved Electives	6-7
	17

Second Semester	Credits
PHA. 286—Aquatics for Men	2-0
PHA. 325—Conduct of Playgrounds and Indoor Centers	3
MSC. 366—Music in Field of Recreation	3
EDE. 400—Problems of Instruction	3
EDS. 300—The Secondary School Program	3
Approved Electives	3-5
	17

Senior Year

PHA. 324—Social Recreation	3
PHA. 373—Teaching Physical Education in the Elementary Schools	3
PHA. 376—First Aid and Injuries	2
PHA. 446—Administration of Community Recreation	3
Approved Electives	6
	17

PHA. 449—The Operation of Recreation Programs	15
	15

V. Curriculum in Physical Therapy

Leading to the Degree of Bachelor of Science in Physical Therapy

This curriculum is designed to prepare students (1) to become physical therapists in and with hospitals, clinics, and other institutions and agencies concerned with the physical rehabilitation of children and adults; (2) to become physical therapy educators who can supervise and teach persons studying to become physical therapists.

Admission: To register for this curriculum students must have completed the following courses while registered in the University College:

BLY. 161-162—Biology Laboratory, 2-2 credits
CY. 121-122—General Chemistry, 4-4 credits
PSY. 201—General Psychology, 3 credits
PSY. 205—Social Psychology or PSY. 202—Personality Development or PSY. 211—Psychological Measurement, 3 credits
PHA. 295—Introduction to Physical Therapy, 2 credits

Junior Year

First Semester	Credits	Second Semester	Credits
SCH. 201—Effective Speaking	3	PHA. 375—Adapted Physical Education	2
PS. 201—General Physics	3	PS. 202—General Physics	3
PS. 207—Physics Laboratory	1	PS. 208—Physics Laboratory	1
PHA. 315—Applied Anatomy and Physiology	3	BLY. 574—General and Comparative Physiology	4
Approved Electives	5	Approved Electives	5
	15		15

Senior Year

The professional (fourth year) phase of the curriculum leading to the degree Bachelor of Science in Physical Therapy is not at present available on the campus of the University of Florida. After completion of the three-year curriculum listed, it will be necessary for the student to transfer to a school of Physical Therapy approved by the American Medical Association for this type of work. Such courses vary from a minimum of 12 months in length to 16 months in length.

Such credits as are earned while the student is in attendance at an approved school of Physical Therapy will be evaluated by the University of Florida. This evaluation must result in an accumulation of a minimum of 30 semester hours credit. When this requirement has been satisfied, the student is eligible to become a candidate for the degree Bachelor of Science in Physical Therapy at the University of Florida.

In addition to the granting of the degree, the student will have earned a certificate of accreditation and will be a qualified physical therapist.

THE PHYSICAL FITNESS AND SPORTS PROGRAMS of the COLLEGE OF PHYSICAL EDUCATION AND HEALTH

The Required Physical Education Program for Men

The University Requirement:

Each undergraduate male student is required to register for and participate satisfactorily in the prescribed program of Required Physical Education until he receives his degree or has been in attendance eight semesters. The program requirement for transfer students and students who graduate in less than eight semesters is adjusted on an individual basis by the Head of the Department of Required Physical Education for Men.

The Curriculum:

1. The Regular Program

A. The Basic Program

During his first semester a student shall engage in the following program of activities which shall be known as the Basic Program; conditioning activities, boxing, gymnastics and tumbling, track and field activities, rugged games, and functional health instruction. Students take a swimming classification test during this program and those who fail the test must register for beginning swimming as a first requirement in the Advanced Sports Program. Participants in freshman sports may substitute the sport for the requirement of the Basic Program.

B. The Advanced Sports Program

Students who satisfactorily pass the Physical Fitness Test after participating in the Basic Program are eligible to be assigned to a Sports Instruction class designed to prepare them to be successful participants in that sport as measured by the appropriate Sports Proficiency Test. Each Sports Proficiency Test consists of: (a) a test of the knowledge of the sport and its rules; (b) a skill test; (c) a practical test of the student's ability to compete in that sport. A student shall satisfactorily pass three sports while assigned to the advanced Sports Program; two of them must come from among Golf, Handball, Swimming, and Tennis. The third sport may be selected from any other activity taught in the program. These activities include, in addition to the four already named, Advanced Golf, Advanced Handball, Advanced Tennis, Archery, Badminton, Bait Casting, Basketball, Bowling, Equitation, Gymnastics, Lacrosse, Rifle Marksmanship, Senior Lifesaving, Soccer, Social Dancing, Square Dancing, Tag Football and Softball, Tumbling, Volleyball, and Water Safety Instructor's Course.

C. The Elective Sports Program

Students who satisfactorily complete the Advanced Sports Program are eligible for assignment to the Elective Sports Program. While assigned to the Elective Sports Program, they must pass one additional sport from those not utilized in meeting the requirements of the Advanced Sports Program. Participants in varsity sports may substitute that activity for the

requirements of the Elective Sports Program. After completing the Elective Program, the student registers for Physical Education and must meet in consultation with a member of the Required Physical Education faculty each semester, or he may elect to attend class in an additional sport.

2. The Adapted Program

Students with physical limitations or deviations are assigned to a program of adapted physical education by the Department of Student Health. The pattern of the program for these students parallels that of students assigned to the regular Required Physical Education program, with adjustments appropriate to their needs, and is supervised by the Department of Required Physical Education.

The Physical Fitness Test:

As long as a student is registered for and attending classes in the regular program of Required Physical Education, he must take a Physical Fitness Test at the end of each semester. Failure to meet the minimum standard in the Physical Fitness Test at the end of any semester shall cause a student to obtain assignment in the program after a conference with a member of the Required Physical Education faculty.

Attendance at Class:

Regular attendance in Required Physical Education classes is necessary to meet the University attendance requirements. It is the policy of the Department that irregular attendance will be penalized as described under "Absences or Unsatisfactory Work" in the Student Regulations Section of the Catalog. A student who fails to have satisfactory attendance is given additional assignment in the program.

The Required Physical Education Program for Women

Women students are required to register for and participate satisfactorily in four semesters of physical education. Sufficient activities are offered so that a student may enjoy a balanced physical education program. Students taking fewer than ten semester hours, students twenty-six years of age or over, and veterans are exempt from this requirement. The program for transfer students is adjusted on an individual basis by the Head of the Department of Required Physical Education for Women.

Each student is assigned an advisor who guides her in selecting sports and dance activities adapted to her needs. Through these activities she is offered the opportunity to acquire mental and emotional balance, general physical fitness, and an understanding of the principles of good body mechanics and of healthful living practices.

Classification:

Each student, upon entering the University, shall submit a record of medical examination to the Department of Student Health, and after consultation with a University physician, shall receive a medical rating. This will specify whether her classification in the Required Program shall be an A (regular) or B (adapted) medical rating.

The Program:

A. The Program for students with an A Medical Rating:

1. Unless excused by the University physician, all women students while enrolled are required to pass a swimming test or satisfactorily complete a course in swimming.

2. To complete the four semester requirements in physical education a student may participate in activities selected from the following areas:
   a. Rhythmics

      Modern Dance, Social Dance, and Square Dance.

   b. Individual and Dual Sports

      Archery, Badminton, Bait Casting, Bowling, Equitation, Golf, Life Saving, Swimming, and Tennis.

   c. Team Sports

      Soccer, Speedball, Basketball, Volleyball, and Softball.
3. Students may elect Equitation upon payment of a fee of $60.00 per semester and securing parental permission.
4. Any student who has satisfactorily passed the requirements for four semesters of physical education may voluntarily participate in any activity approved by the Head of the Department of Required Physical Education for Women. Any student entering the program must register, and after registering, shall be expected to attend her chosen class regularly.

B. Students assigned to the Adapted Program by the University Physician because of physical defects or deficiencies shall engage in a program recommended by the Department of Student Health and administered by a member of the Women's Physical Education staff. This program parallels that of the student with an A Medical Rating, but it is adjusted to meet individual needs.

Attendance at Class:

Regular attendance in Required Physical Education classes is necessary to meet the University attendance requirements. It is the policy of the Department that irregular attendance will be penalized as described under "Absences or Unsatisfactory Work" in the Student Regulations section of the University Catalog.

MILITARY DEPARTMENTS

The University of Florida offers instruction in the Military Sciences as an integral part of its curricula. The Department of the Army and the Department of the Air Force each maintain a Reserve Officer's Training Corps (ROTC) and provide staffs of officers and detachments of enlisted men to provide for the administration and instruction of cadets and for the maintenance of equipment required for the courses.

BASIC COURSE, ARMY AND AIR FORCE

The Army and the Air Force Basic Courses include four semesters (2 school years) of instruction. The University requires that all physically fit male students, except certain veterans and transfer students, complete the Basic Course as a prerequisite to graduation. The completion of either the Army or the Air Force Basic Course discharges this obligation.

Students are issued uniforms and text books by the University and are held financially responsible for the care of such property and for its prompt return upon proper call.

ARMY ADVANCED COURSE

The Army Advanced Course includes four semesters (2 school years) of instruction at the University and a six-weeks summer camp at a military installation, which normally is attended by the student at the end of his first year's Advanced Course work. Each student applicant for the Advanced Course must have completed the Army ROTC Basic Course or have had previous military training acceptable as a substitute therefor. Final selection of students for the Advanced Course is made by the President of the University and the Professor of Military Science and Tactics. Flight (Pilot) training is available for selected Senior Cadets.

Students are issued regulation Army uniforms and text books. They are financially responsible for the care of such property and for its return upon proper call. Each student receives from the United States Government a daily monetary subsistence allowance, presently totalling about $27.00 per month, which is paid monthly during the period of enrollment in the Advanced Course for not more than a total of 595 days. Students are paid for travel to and from the six-weeks summer camp; while at camp they are provided quarters, rations and uniforms and are paid at the rate of $78.00 per month.

All students take the General Military Science course. Upon the student's successful completion of the Advanced Course and graduation, he is commissioned a second lieutenant in the United States Army Reserve in a branch of the Army as determined by a consideration of his choice, his academic major, his aptitude and the need of the Army.

Outstanding Advanced Course students are designated "Distinguished Military Students" and upon graduation from the University are designated "Distinguished Military Graduates." A Distinguished Military Student may apply for appointment as second lieutenant in the Regular Army at any time prior to his designation as "Distinguished Military Graduate". A number of University of Florida graduates accept Regular Army appointments each year.

AIR FORCE ADVANCED COURSE

The Air Force ROTC Advanced Course includes four semesters (2 school years) of instruction at the University; and a summer camp conducted at an Air Force Base which is normally attended by the student at the end of his first year's Advanced

Course work. Each student applicant for the Advanced Course must have completed the Basic Air Force ROTC Course or have had previous active military service acceptable as a substitute therefor. However, veterans entering the University at freshman or sophomore level who desire a commission through Air Force ROTC will be required to take in phase with nonveteran contemporaries the portion of the basic program which remains. Applicants must have a C average academically to be eligible for acceptance into the Advanced Course. Final selection is made by the President of the University and the Professor of Air Science.

Students are issued regulation uniforms by the University. When the student receives his degree and commission he will retain all uniforms issued him by the University. The text books issued by the Department of Air Science are the property of the United States Air Force. The cadets are financially responsible for the care of such property and for its return upon proper call. Each student receives a daily monetary subsistence allowance, presently totalling about $27.00 per month, which is paid at the end of each three-month period during enrollment in the Advanced Course, but not more than a total of 595 days. Students are paid for travel to and from the summer camp; while at camp they are provided quarters, rations and uniforms and are paid at the rate of $78.00 per month.

All students enrolled in either the Basic or Advanced Course Air Force ROTC will take the "Generalized" Program. This program is aimed primarily at acquainting the potential officer with the operation of all branches of the Air Force, teaching him the responsibility and duties of an Air Force officer and in general enabling him to assume his duties as an officer upon graduation from the University. Particular emphasis is placed on the flying program of the Air Force and all cadets are encouraged to apply for this training upon graduation. If accepted for this training, the cadet may go to the flying school in officer grade and receive full pay and allowance of such.

Upon completion of the cadet's Air Force ROTC program and receipt of his degree, he normally will be called to active duty and given an assignment commensurate with his academic major and the needs of the Air Force. Consideration is given to the desires of the student regarding his assignment.

Outstanding Air Force ROTC Advanced Course students who are appointed Distinguished Military Graduates are eligible for making application for a Regular commission but must be serving on active duty.

AIR FORCE ROTC FOR WOMEN

The Air Force ROTC program is now open for women students entering the University. Freshmen and sophomores may enroll in the regular ROTC Course for academic credit only; however, those who concurrently enroll in Advanced ROTC during their junior and senior years will not only receive academic credit, but also, be provided with uniforms and receive pay (approximately $266.00 per year). All classes will be on a coeducational basis, except for summer encampment. This encampment will consist of a twenty-eight day summer training period between the junior and senior years. Upon successful completion of the Advanced AFROTC Course and award of a baccalaureate degree, these young women will be qualified to be commissioned as second lieutenants in the Air Force.

The newly commissioned WAF officers may be assigned directly to jobs or be first sent to one of the many Air Force technical schools for training in a specialized field. They will receive the same pay and benefits as men in the same grades.

STATUS OF STUDENTS WHO HAVE HAD MILITARY TRAINING AT OTHER SCHOOLS

Students transferring from other universities with Senior ROTC units are allowed college credit for Military or Air Science completed at such institutions, up to the amount allowed by the institution from which the transfer is made, provided such credit does not exceed four semester hours for the basic Course. The eligibility for admission of such students to Military and Air Science courses at the University of Florida is determined by the Professor of Military Science and Tactics or the Professor of Air Science as appropriate. No credit is allowed in the Military or Air Science courses for Junior ROTC work.

DEFERMENT FROM SELECTIVE SERVICE

Within the limitations of assigned quotas, those students enrolled in the Army or Air Force ROTC who meet academic and other standards may be deferred from Selective Service induction provided they sign the prescribed deferment agreement. This agreement provides that the applicant will complete the Basic Course, if enrolled therein; will enroll and complete the Advanced Course, if accepted therefor; will accept a commission if tendered; and will serve on active duty for a period of not less than two years after receipt of commission, subject to order of the Secretary of the Army (Air Force) and will continue a member of a Regular or Reserve component of the Army (Air Force) until the eighth anniversary of his receipt of commission. Deferments are terminated of those students who do not continue the course or whose academic work or conduct is such as to warrant the conclusion that they are not suitable officer material.

THE GRADUATE DIVISION

THE GRADUATE SCHOOL

ADMINISTRATION

The Graduate School consists of the Dean, the Graduate Council, and the Graduate Faculty. It is responsible for the establishment and enforcement of minimum general standards of graduate work in the University and for the coordination of the graduate programs of the various colleges and divisions of the University. The responsibility for the detailed operation of graduate programs is vested in the individual collges and divisions.

ADMISSION*

Application for admission to the Graduate School must be made to the Director of Admissions on forms supplied by his office and at times stipulated in the University Calendar. Applications are referred by the Director to the graduate selection committees of the various colleges and divisions for approval or disapproval. No transcript will be accepted as official unless it is received directly from the registrar of the institution in which the work was done.

In general, no student who is a graduate of a non-accredited institution will be considered for graduate study in any unit of the University.

Members of the faculty of the University of Florida with a rank of assistant professor or above (or equivalent) may not receive a graduate degree from this institution. They may, however, register for work in the Graduate School and apply the credit earned to graduate degrees to be conferred by other institutions.

Grade Standards.—Except as noted below, unqualified admission to the Graduate School is dependent upon presentation of an undergraduate record from an accredited college or curriculum with an average grade of "B" for the junior and senior years. In some units of the Graduate School and on the more advanced levels of graduate study, an undergraduate average considerably above "B" may be required.

If the student's undergraduate grades do not meet the standard for unqualified admission, he may in exceptional cases be granted qualified admission as a fifth-year student by the college of his choice. In this status he will be given a program of about 15 semester hours consisting of advanced undergraduate courses and no more than 6 semester hours of graduate courses. Upon completion of this program with an average grade of "B" or better, the student will be given unqualified admission to the Graduate School. Up to 12 hours of the trial program may be credited to his graduate record. The trial program will not be continued beyond the originally planned period.

Admission to programs leading to degrees of Master of Arts in Education, Master of Education and Master of Physical Education and Health (for a graduate of an accredited college) may be granted on either of the following bases:

1. A 2.5 honor-point average, as calculated at the University of Florida, for the last two years of undergraduate work including at least 60 semester hours, and a satisfactory score on the Graduate Record Examinations—Scholastic Aptitude Test.

2. A student with less than a 2.5 honor-point average in his last two years of undergraduate work may register as a fifth-year student if he has presented

*See also the general regulations governing admissions and the statements of the individual colleges and divisions.

satisfactory scores on the Graduate Record Examinations—Scholastic Aptitude Test. Upon completion of 15 semester hours of a planned and approved trial program with an honor-point average of 3.0 or above, the student may be admitted for study toward the master's degree. Not more than 9 semester hours of this trial program may be taken in courses numbered 600 and above. If the student makes an honor-point average of 3.0 or above, upon the approval of the Graduate Committee of the College, up to 15 semester hours of his trial program may be credited to his graduate record.

In the College of Agriculture, admission to graduate study is normally limited to those students who have maintained at least a 2.5 honor-point average in their upper-division work and 3.0 in their major subject. For students with an undergraduate major in general agriculture, the minimum upper-division average is 2.75. In exceptional cases, where a candidate has demonstratetd in some other way his fitness to do graduate work, as, for instance, outstanding achievement since earning the bachelor's degree, he may be considered for admission.

Graduate Record Examinations Required for Admission.—Admission to the Graduate School is dependent upon the undergraduate record, upon other evidence of ability, and upon the scores obtained on the Graduate Record Examinations. Each applicant for admission must submit scores on the aptitude test of the GRE, but either at the request of the department concerned or on his own volition, the applicant may submit the score on one or more advanced subject-matter tests of the GRE. The scores on all tests taken will be weighed in regard to admission. The GRE scores will also be given consideration at a later date along with the graduate scholastic record when the student applies for admission as a candidate for an advanced degree.

The Graduate Record Examinations are given four times a year—in November, January, April, and July, at a great many locations in the United States, including Gainesville, Florida. To determine exact dates and the most convenient location, the student should write to The Educational Testing Service, Princeton, New Jersey. Applications are required several weeks ahead of the examination and scores are received about a month after the examination. Hence it is necessary to apply for the GRE in early October if admission is desired in February, in early April for admission to the summer session, and in early June for admission in September. Undergraduates are advised to take the Graduate Record Examinations in January or April if admission to the Graduate School is desired for the following September.

Students educated in foreign countries and applying for admission while residing outside the United States may be given a postponement and permitted to take the GRE after initial registration at the University of Florida.

Undergraduate Registration for Graduate Credit.—An undergraduate student at the University of Florida who has less than one semester of course work to complete for the bachelor's degree may request, in writing, through the dean of his college, approval by the Dean of the Graduate School of course registration eligible for graduate credit. Such approval can be given only to students who have maintained a "B" average in the upper division and whose total proposed program does not exceed 15 semester hours in a single regular semester or 6 hours in a summer term. Commonly, courses to be approved should be of full graduate caliber; approval of an advanced undergraduate course will be restricted to one not normally a part of the undergraduate program prerequisite to the graduate studies to be undertaken. For application to a specific advanced degree the course work taken must be earned with a grade of "A" or

"B" and be recommended for transfer to the student's graduate record by his supervisory committee after he has been admitted to the Graduate School. Courses beyond the requirement of the bachelor's degree which are taken without such approval are not eligible for transfer as graduate credit. Foundation work required for a change of major must be taken without graduate credit.

Consultation with College and Department.—After the student has been admitted to the Graduate School but before his first registration, he should consult the college and department in which he will do his work concerning course requirements, deficiencies, if any, the planning of a program, special regulations, etc. All registrations require the signature of the dean of the college in which the degree is to be awarded or of his representative.

GENERAL REGULATIONS AND INSTRUCTIONS

Student Responsibility.—It is the responsibility of the student to inform himself concerning, and to carry out, all regulations and procedures required by the course he is pursing. In no case will a rule be waived or an exception granted because a student pleads ignorance of the rule or asserts that he was not informed of it by his advisor or other authority.

Loads.—The maximum *full-time registration* in a single regular semester is 15 semester hours; the minimum is 12 semester hours. Part-time employment of any kind reduces the maximum study load permitted. One-third time graduate assistants with departmental duties of 15 hours per week may register for a maximum of 12 semester hours. One-half time graduate assistants with departmental duties of 20 hours per week may register for a maximum of 10 semester hours. Full-time employees of the University may register for one graduate course of no more than 4 semester hours or for two courses totalling no more than 6 semester hours, if one of the two courses is a thesis course. Full-time public school personnel are normally registered for a single course.

During the *summer session,* full-time registration for a candidate for a thesis degree is 6 to 8 semester hours; full-time registration for a student in a non-thesis master's program or an Ed.S. program is 9 semester hours. A graduate assistant may not exceed 6 semester hours, and a full-time employee is limited to one course or 3 semester hours. These regulations apply to the eight-week summer term.

Holders of fellowships and assistantships are required to register for graduate study programs commensurate with the study time permitted by their awards and in no case less than 6 semester hours.

Courses and Credits.—(1)Courses numbered 500 and above are for fifth-year or other advanced undergraduate programs. Regulations as to the use of these courses in graduate programs, grading, and minimum class size will be the same as for courses in the 400 category. (2) Courses numbered 600 and above are limited to graduate students. (3) Courses numbered 700 and above are graduate courses primarily for advanced graduate students.

For the purpose of graduate study, undergraduate courses numbered 300 and above are acceptable for minor study when taken as a part of an approved graduate program. Individual undergraduate courses in the 500 category, or comparable courses from the 400 category which have been approved for graduate study by the Graduate Council, may be used as a part of the major study. However, in such cases, fifty per cent of the minimum course requirements must be in courses designated for graduate students only.

A complete list of approved graduate courses appears in the section of this Catalog entitled Departmental Courses. Departments reserve the right to decide which of these graduate courses will be given in any semester or summer session. The published Schedule of Courses does not always include all graduate courses offered; the departments, therefore, should be consulted concerning available courses.

Grades.—Passing grades for graduate students in courses numbered below 600 are "A" and "B". Passing grades in courses numbered 600 and above are "A", "B", and "C"; however, "C" grades in courses numbered 600 and above count toward a graduate degree only if an equal number of credit hours in courses numbered 600 and above are earned with a grade of "A".

Admission to candidacy for a graduate degree and the award of such degree depends (among other requirements) upon maintenance of an average grade of "B" for all work attempted in the major and minor fields. Any grade of "I" (incomplete) in the fields of the major and minor (or minors) must be removed by completing all required work, unless an honor-point average of 3.0 is maintained, including the hours of incomplete courses. Grades in courses numbered 699 and 799 are not considered under this requirement.

Change of Major.—Graduate students already admitted for work in one department who wish to transfer to another department must apply for transfer through the office of the dean of their college and must have their credentials approved by the graduate selection committee having jurisdiction in the new department. The Dean of the Graduate School and the Registrar must be notified in writing of the change in the major field. The student will be required to make up, without graduate credit, any undergraduate deficiences in the new area.

Correspondence and Extension Work.—No courses may be taken for graduate credit by correspondence, and, except in the case of the Master of Arts in Education and the Master of Education degrees, no courses may be taken for graduate credit by extension. In the case of the degrees mentioned, 6 semester hours of authorized extension graduate course work may be taken in the University of Florida for both course and residence credit; extension work taken at another institution (except Florida State University) may not be transferred to the University of Florida for graduate credit of any kind.

Fees.—The fees which graduate students must pay are listed in the section of the Catalog entitled *Expenses.* (See Table of Contents.)

Procedure for Final Semester.—At this stage it is more than usually important for the student to inform himself concerning deadline dates as set forth in the University Calendar and in the announcements issued by the Dean of the Graduate School, and the officials of his college, division, or department.

Early in the last semester the student should make formal application to the Registrar for his degree. When his thesis is ready to be put in final form he should get instructions from the office of the Dean of the Graduate School. He must arrange through the University Bookstore for proper academic costume to be worn at Commencement.

Normally, students in the Graduate School must be registered in the University at the time they receive a degree. If, however, a student has completed all requirements for his degree, including courses, residence, thesis or dissertation, and all examinations, at the time of registration for the semester in which his degree is to be awarded, the

Graduate Council will consider a petition to waive this regulation. *In brief, a student must be registered for the semester in which his final examination is given.*

Other Dates.—The student must observe the regulations and dates for satisfying the *language requirements* and for applying for *admission to candidacy* for the degree sought.

DEGREES OFFERED

Non-Thesis Degrees

Master of Agriculture, with major in any field in Agriculture

Master of Education, with major in any field in Education, including Business Education, and Industrial Arts Education

Master of Physical Education and Health

Master of Rehabilitation Counseling

Specialist in Education

Thesis Degrees

Master of Business Administration, with major in one of the following:

- Accounting
- Business Organization and Operation
- Real Estate

Master of Science in Agriculture, with major in one of the following:

- Agricultural Economics
- Agricultural Education
- Agricultural Engineering
- Agronomy
- Animal Husbandry
- Bacteriology
- Botany
- Dairy Science
- Entomology
- Horticulture
- Plant Pathology
- Poultry Husbandry
- Soils

Master of Science in Building Construction

Master of Science in Community Planning

Master of Science in Engineering, with major in one of the following:

- Aeronautical Engineering
- Chemical Engineering
- Civil Engineering
- Electrical Engineering
- Engineering Mechanics
- Industrial Engineering
- Mechanical Engineering

Master of Science in Forestry

Master of Science in Pharmacy, with major in one of the following:

- Pharmacy
- Pharmacognosy
- Pharmacology
- Pharmaceutical Chemistry

Master of Science, with major in one of the following:

- Bacteriology
- Biology (Zoology)
- Botany
- Cancer Research
- Chemistry
- Entomology
- Geography
- Geology
- Mathematics
- Physics
- Plant Pathology
- Psychology

Master of Fine Arts, with major in one of the following:

- Painting and Drawing
- Crafts

Master of Arts in Architecture, with major in one of the following:

- Architectural Design
- Building Construction

Master of Arts in Education, with major in one of the following:

- Agricultural Education
- Business Education
- Educational Administration
- Elementary Education
- Foundations of Education
- Guidance
- Industrial Arts Education
- Secondary Education

Master of Arts, with major in one of the following:

- Communications
- Economics
- English
- French
- Geography
- German
- History
- Inter-American Area Studies
- Journalism
- Latin
- Mathematics
- Philosophy
- Political Science
- Psychology
- Sociology
- Spanish
- Speech

Doctor of Education

Doctor of Philosophy, with major in one of the following:

- Agricultural Economics
- Agronomy
- Animal Husbandry
- Bacteriology
- Biology (Zoology)
- Cancer Research
- Chemical Engineering
- Chemistry
- Civil Engineering, including
  - Sanitary Engineering
  - Structural Engineering
- Economics
- Economics and Business Administration including Accounting, Business Organization and Operation, Real Estate
- Electrical Engineering
- English
- Geography
- History
- Horticulture
- Inter-American Area Studies
- Mathematics
- Pharmacy, including
  - Pharmacy
  - Pharmacognosy
  - Pharmacology
  - Pharmaceutical Chemistry
- Physics
- Plant Pathology
- Political Science
- Psychology
- Sociology (Latin American)
- Soils
- Spanish
- Speech

THE MASTER'S DEGREES

Residence.—For any master's degree the student must spend at least one full-time academic year, or equivalent, as a graduate student at the University of Florida.

If the work for the master's degree is done entirely in the summer, full-time study during four eight-week sessions will satisfy the residence requirement. This

requirement may be reduced to (but not below) three eight-week summer sessions by transfer of work from another institution or by use of extension or other non-resident credit where accepted by the college concerned and by the Graduate Council.

Transfer of Credits.—Courses of full graduate level to the extent of 6 semester hours may be transferred from an institution approved for this purpose by the Graduate School. Acceptance of transfer credit requires approval of the student's supervisory committee and the Graduate Council. Non-resident or extension work taken at another institution (with the exception of Florida State University) may *not* be transferred to the University of Florida for graduate credit.

Time Limit.—All work for the master's degree must be completed within seven years from the time of first registration.

MASTER'S DEGREE WITHOUT THESIS

MASTER OF EDUCATION

Description and Purpose.—This degree is designed for the professional preparation of teachers, rather than for research. The program has been planned to develop in public school workers a wide range of essential abilities and to give a broad background of advanced general education, rather than to encourage narrow specialization. While not neglecting to add to qualifications already attained, it further aims at overcoming weaknesses in a student's development.

The Master of Education program seeks to develop the student in:

1. An understanding of the nature of the individual and the learning process;
2. An understanding of the purposes, issues, and trends of education in American democracy;
3. An understanding of the social realities of our time and how these condition the educative process;
4. A comprehensive, internally consistent pattern of values in keeping with our democratic traditions; a value-system which the student can apply where issues are concerned;
5. A personal philosophy of education which he can make explicit and which is consistent with his value patterns;
6. The ability to think and act creatively and adequately within his area of specialization or field of work, i.e., to see new problems, to work out solutions, and the ability to communicate to others the results of his thinking and acting.

Transfer of Credits.—If recommended in advance by the Graduate Committee and approved by the Dean of the Graduate School, a student may be permitted to study in other institutions to the extent of (but not to exceed) 6 semester hours. No graduate credits earned prior to admission to the University may be transferred without special recommendation of the Graduate Committee and the approval of the Graduate Council. No more than 6 semester hours of credit may be thus transferred.

Work Required.—Instead of having a fixed requirement of majors and minors, each student will be required to submit a plan of study which shows acceptable balance and direction. The planned program is approved by the student's counselor, with whose assistance the plan is first developed, then by the Education department head concerned and the Office of Graduate Studies in Education. After the program has been developed, any changes must be requested in writing and similarly approved.

The minimum course requirement is 36 semester hours, of which not more than 9 may be taken in any summer term (6 in six weeks, 3 in three weeks), and not more than 15 in any one semester. Six semester hours of workshop or extension courses may be allowed and will count as resident credit.

At least 50 per cent of the minimum course requirements shall be from courses numbered 600 and above.

Courses designated as field laboratory courses may be taken to the extent of 6 semester hours of credit. It should be noted, however, that the University imposes a limit of 12 hours of credit in the aggregate on work allowed from (1) off-campus workshops and extension courses, (2) field laboratory courses, and (3) courses transferred from other institutions.

Where the student has had no previous work in professional courses in Education he must complete a minimum of 36 hours of professional work in Education, including work at the graduate and undergraduate level, in order to qualify for this degree. Students planning to take work in closely related fields should consult their counselors as to the acceptability of such work toward meeting this requirement. In general, a minimum of 12 semester hours outside the field of Education is required.

A thesis is not required.

A reading knowledge of a foreign language is not required, but correct and effective use of the English language is expected of all candidates. Admission to the work of this program is not a guarantee that the student will be admitted to candidacy for the degree.

Admission to Candidacy.—The faculty makes a determination as to the competence of the student at the time of his admission to candidacy. Admission to candidacy for the Master of Education degree may be recommended to the Graduate Council by the Graduate Committee of the College of Education on the basis of an unassembled examination to be given at the end of from 12 to 18 semester hours of graduate work at the University of Florida. The unassembled examination is evaluated by a committee of the faculty, which may recommend supplementary oral and/or written examinations for students whose admission to candidacy is in doubt.

The unassembled examination includes: (1) the student's academic record to date, (2) the student's scores on the *Graduate Record Examination,* (3) evidence of competency in the use (oral and written) of the English language, (4) evaluation of personal qualities and promise of professional attainment by persons to whom the applicant's record is known, (5) the student's experience record, and (6) any other appropriate information.

The unassembled examination is administered through the Office of Graduate studies in Education for the Graduate Committee.

The student's remaining program of study will be planned in terms of needs as revealed in the Admission to Candidacy Examination. On approval of the Graduate Committee, the candidate will be recommended for the degree upon the satisfactory completion of the designated course work.

The candidate must have completed at least one year of teaching (or the equivalent) prior to taking the last 6 semester hours of work, or must have included in his record the satisfactory completion of an internship program or a minimum of 6 semester hours of student teaching.

The Graduate Committee of the College of Education.—A special counselor is

appointed for each student in the Master of Education program. His work is under the general supervision of the Graduate Committee in the College of Education. The program is administered through the Office of Graduate studies in Education.

MASTER OF AGRICULTURE

The degree of Master of Agriculture is designed for those students who wish additional training before entering business occupations or professions, rather than for those interested primarily in research. The basic requirements, including those for admission, residence, supervisory committee, plan of study and admission to candidacy, are the same as for the Master of Science in Agriculture degree, as outlined elsewhere, but the work requirements are made to conform to the specific objectives of this degree.

Work Required.—A minimum of 36 semester hours of course work is required, at least 18 of which shall be designated strictly for graduates. Each student's program is designed to take into account the qualifications and needs of the individual and is subject to the approval of the supervisory committee. A thesis is not required, but the student must submit reports, term papers, and records of work accomplished. A *comprehensive written qualifying examination,* given by the supervisory committee is required before the beginning of the second semester of work. Failure to qualify in this examination will result either in the student's elimination from the program or in taking additional course work. A *final oral examination* by the supervisory committee covering the whole field of study of the candidate is required.

For further details, inquire of the Dean of the College of Agriculture.

MASTER OF PHYSICAL EDUCATION AND HEALTH

Work Required.—A minimum of 30 semester hours of course work is required, at least 15 of which must be courses in the fields of Physical Education, Health Education or Recreation designated strictly for graduates, or courses numbered 500 and above if approved for graduate major credit. Of the remaining 15 hours, at least 9 semester hours must be taken in courses outside the College of Physical Education and Health. At least 50 per cent of the minimum course requirements shall be from courses numbered 600 and above.

All degree candidates must complete Florida teaching certification requirements in Physical Education by the conclusion of the master's degree program. Certification requirements must be met as a part of and/or in addition to degree requirements, if not already completed before admission to graduate study.

Supervisory Committee.—A committee of five members of the faculty of the College of Physical Education and Health, with the Dean of the College or some person designated by him serving as chairman, and the Dean of the Graduate School as an ex officio member, will supervise the work of students registered in this program, subject to the approval of the Graduate Council.

Admission to Candidacy.—Admission to the work of this program is not a guarantee that the student will be admitted to candidacy for the degree. The student will be required to pass a written and/or oral examination in addition to being recommended by the supervisory committee for admission to candidacy. This examination should be taken by the end of the student's first semester of residence.

Final Examination.—A thesis is not required but the candidate must pass a final examination at the close of his course work. This written and/or oral examination will

be administered by the supervisory committee and will be confined largely to the student's major field of study.

MASTER'S DEGREE WITH THESIS

Required Registration.—The minimum registration required for the master's degree with thesis is 30 semester hours, including no less than 24 semester hours of regular course work and 6 semester hours of the research and thesis course numbered 699 in all departments.

At least one-half of the required 24 hours of regular course work must be in a single field of study designated the major, and the remainder, called the minor must be in a different but related subject matter. One 6-hour minor is required; two 6-hour minors or one 12-hour minor may be taken. Minor work must be in a department other than the major. In special cases this requirement may be modified, but only with the written permission of the Dean of the Graduate School.

The work in the major field must be in courses designated strictly for graduates (numbered 600 and above), or, if approved by the Graduate Dean, in courses designated for advanced undergraduates and graduates. For the minor, courses numbered 300 and above may be taken.

At least 50 per cent of the required 24 semester hours of regular course work must be in courses numbered 600 and above. Registration in 699 is limited to a total of 12 semester hours.

Thesis.—All candidates for this degree are required to prepare and present a thesis (or equivalent in creative work) acceptable to their supervisory committees, the Dean of the Graduate School, and the Graduate Council. The candidate should consult the office of the Dean for instructions concerning the form of the thesis. The original copy of the thesis, bound in temporary binding, and accompanied by three copies of a brief abstract, must be in the Dean's office on or before the dates specified in the University Calendar. After the thesis is accepted, the original copy, together with the first carbon copy, will be deposited in the University Library.

Language Requirements.—(1) The requirement of a reading knowledge of a foreign language is left to the discretion of the student's supervisory committee or college. When a foreign language is required, the examination will be conducted by the Department of Foreign Languages; if an examination has already been passed at another institution, it must be validated at the University of Florida by the Department of Foreign Languages. If the student is majoring in a foreign language, that language may not be used to satisfy this requirement. The foreign language requirement must be satisfied before the student is admitted to candidacy. (2) The ability to use the English language correctly and effectively, as judged by the supervisory committee, is required of all candidates for this degree.

Special Supervisory Committee.—A special supervisory committee of not less than three members will be appointed for each student by the Graduate Dean upon the recommendation of the college concerned. This committee should be appointed as early as possible after the student has been admitted to the Graduate School and, in general, not later than the end of the first semester of study. The Dean of the Graduate School is an ex officio member of all supervisory committees.

Admission to Candidacy.—When a student has completed about one-half of his work for his degree, he should apply for admission to candidacy for that degree, using the forms provided for the purpose in the office of the Dean of the Graduate School.

In order to be admitted to candidacy, the student must have (1) maintained a "B" average in registered course work, (2) passed a foreign language examination and a qualifying examination (if these are required in his curriculum), (3) chosen his thesis topic, (4) satisfied his supervisory committee, department head, and college dean that he is qualified to become a candidate for his degree. It is the responsibility of his supervisory committee at this time to make such investigation as is necessary to determine his eligibility.

General Examination.—When all of the student's work is completed, or practically so, including the regular courses and the thesis, his supervisory committee is required to examine him orally or in writing or both on (1) his thesis, (2) his major subject, (3) his minor or minors, (4) matters of a general nature pertaining to his field of study. Using the form provided for the purpose the committee shall report in writing to the Dean of the Graduate School not later than one week before the time for the conferring of the degree whether all work has been completed in a satisfactory manner and whether on the basis of the final examination the student is recommended for his degree. In no case may this examination be scheduled earlier than six months before the degree is to be conferred, without special approval of the Graduate Council.

Special Thesis Abstract Required.—At the request of the State Department of Education of the State of Florida, the College of Education requires all candidates for the degree of Master of Arts in Education to prepare a 750 word abstract of the thesis, which is forwarded to the State Department for informational purposes.

THE ADVANCED SCHOOL OF THE COLLEGE OF EDUCATION

The Advanced School of the College of Education offers two degrees, the degree of Specialist in Education and the Doctor of Education degree. Work in the Advanced School will be available only to those who have shown a high degree of ability in their first year of graduate work. The purpose of the Advanced School is to develop leadership, research competency and specialization.

Admission to the Advanced School in Education.—Admission to the Advanced School will be open only to persons who have:

1. Completed two school years of successful professional experience;
2. Successfully completed 36 hours in education.

Admission to the Advanced School will be based on the following criteria:

1. High scholastic average during the fifth-year work (3.5 honor-point average or above, as computed at the University of Florida, will be considered evidence of good scholarship);
2. Results from the Graduate Record Examinations—Scholastic Aptitude and Advanced Education Tests;
3. Results from the Miller Analogies Test;
4. An oral examination administered by the department in which the student seeks to specialize;
5. Special interviews for individuals for whom the department of specialization seeks more data.

The judgment concerning admission of an individual student will be based on the consideration of a student's performance in all of these areas by the department in which the student desires to specialize. The department will certify to the Admissions Committee that the student has met the criteria for admission to the Advanced School.

In all cases the record, experience, and personal qualifications of the person applying for admission are subject to the approval of the Admissions Committee.

Where possible, students should seek admission to the Advanced School before enrolling in any courses beyond the master's degree. Where this procedure is impossible, the student will register in the Graduate School and during the first semester of his work beyond the master's degree apply for admission to the Advanced School. If such candidate is found to be eligible, appropriate work taken during that term will be included in the planned program.

After completion of the fifth year any student approved by the Admissions Committee may register for courses, but admission to the Advanced School must be obtained before work may be counted for degrees or certificates above the master's level.

SPECIALIST IN EDUCATION

If the student chooses the Specialist in Education degree he will plan a minimum 36-hour program with his counselor. A maximum of 6 hours of transferred credit may be included. Such work must have been completed in an institution which offers the doctor's degree. No extension work may be transferred. Up to 6 hours in appropriate field laboratory courses, or 3 hours in field laboratory and 3 hours in regular extension courses offered by the General Extension Division of the University of Florida and Florida State University may be included.

The planned program of specialization must include at least 24 hours in courses open only to graduate students and the remainder in courses open to graduate and undergraduate students. The student may specialize in any of the established areas of the College of Education.

A thesis is not required. Emphasis will be placed upon the use of research rather than upon the development of skills in research techniques.

Admission to the Advanced School, the successful completion of one semester of work, and the approval of the department of specialization will constitute admission to candidacy for the Specialist in Education degree.

At the end of the 36-hour program the student will be given a final written and a final oral examination by a committee selected by the head of his area of specialization. Upon passing the examination the candidate will be awarded the Specialist in Education degree upon the approval of the faculty, and the Graduate Council.

The Ed.S. is planned as a terminal degree. If at the end of his program the student wishes to work for the Ed.D. he must meet the requirements stated for that degree.

Time Limit.—All work for the Specialist in Education degree must be completed within seven years from the time of first registration.

DOCTOR OF EDUCATION

The Doctor of Education degree is designed to develop scholarship and leadership in the field of Education. Each doctoral candidate is expected to achieve competence in the broad field of Education and in an area of specialization in which adequate supervision is available.

Administration of the program leading to this degree is cared for through the Office of Graduate Studies in Education, which carries out the policies of the Graduate School and the Graduate Committee of the College of Education.

Admission to a program of work leading to the degree of Doctor of Education requires admission to the Advanced School of the College of Education, described previously, as well as admission to the Graduate School of the University of Florida.

All courses beyond the master's degree taken at another institution, to be applied toward the Doctor of Education degree, must be taken at an institution offering the doctor's degree and approved for the transfer of graduate credit by the Graduate School of the University of Florida.

Minors.—Minor work, or work in cognate fields is required. If one minor is selected, at least 18 hours of work therein will be required; if two minors are chosen, one must have at least 12 hours of course work, the other at least six. Minors may not be taken in any branch of Education.

In lieu of a minor or minors, the candidate may present a suitable program of not fewer than 18 hours of cognate work in fields other than Education. This program must have the approval of the student's supervisory committee. The College of Education faculty will expect the candidate to be prepared to answer questions, at the time of his oral examination, in any of the areas so chosen.

Admission to Candidacy.—Admission to Candidacy for the degree of Doctor of Education rests on successful completion of the qualifying examinations. Recommendation to the Graduate School for admission to candidacy is based on action of the supervisory committee, subject to the approval of the Graduate Committee of the College of Education.

The Qualifying Examination.—The applicant is recommended for the qualifying examination by his supervisory committee after he has completed sufficient course work and the research preparation requirements of the College of Education.

The examination consists of (1) a general section, administered by the Graduate Committee of the College of Education to all applicants; (2) a field of specialization section administered by the department or faculty groups concerned; (3) examination in the minor or minors, where involved; and (4) an oral examination conducted by the applicant's supervisory committee.

The Seminar.—Each student is expected to develop a thesis project to be considered by a general doctoral seminar in the College. Participants in the seminar will be faculty members of the college, other advanced students, and members of the supervisory committee. At the conclusion of the seminar the supervisory committee will report thereon to the Graduate Committee of the College of Education.

Research Preparation Requirement.— This requirement is satisfied by meeting the requirements in both Group 1 and Group 2 below:

Group 1.—(1) a course in Education Research (EDF. 760) and

(2) the *library usage* examination usually given in connection with EDF. 760 at the University of Florida) *and*

(3) a basic course in *statistics* (EDF. 360, or PSY. 211, or MS. 310, at the University of Florida).

Group 2.—either

(1) a reading knowledge of one foreign language relevant to the student's needs, *or*

(2) one of the following courses in measurements, statistics, or research: SY. 547 or 670; EDF. 660 or PSY. 605; EDS. 605 or EDE. 702; EDF. 650; PSY. 503, 504, 632, or 743; PHA. 605 or 510.

There is no language requirement for the Doctor of Education degree. Courses taken at other institutions which may be the equivalent of course requirements indicated above may be considered on recommendation of the applicant's supervisory committee.

Abstracts.—For the purpose of inclusion in a summary of research studies in Education, published by the College of Education, the candidate must supply one 1500-2500 word abstract of his dissertation, in addition to such other abstracts as may be required by the Dean of the Graduate School.

For information relating to *Residence,* the *Supervisory Committee, Time Limit,* the *Dissertation, Publication of the Dissertation,* and the *Final Examination,* the student is referred to the material presented under the heading *Doctor of Philosophy.* These statements are applicable to both degrees.

DOCTOR OF PHILOSOPHY

Course Requirements.—Doctoral study consists of the independent mastery of a field of knowledge and the successful prosecution of research, rather than in following out the steps of an established curriculum. For this reason, doctoral students are thrown in large measure on their own responsibility, and doctoral programs, are more flexible and varied than those leading to lower degrees. The Graduate Council does not specify just what courses will be required for the Ph.D. degree, or how many. The basic general requirement is that the program should be unified in relation to a clear objective and that it should have the considered approval of the student's supervisory committee.

At least one and not more than two minors must be taken. The minor or minors may occupy as much as one-third of a student's total time, or, roughly, one-half of the time devoted to course and seminar work.

Supervisory Committee.—The supervisory committee for a candidate for the degree of Doctor of Philosophy should consist of at least five members, chosen from the Graduate Faculty. At least three members should be from the college or department recommending the degree, and one or two members should be drawn from a different educational discipline for the purpose of representing the student's minor or minors and furthering the coordination on this campus between colleges and disciplines. Supervisory committees are nominated by the department head (in no case by the student), approved by the dean of the college, and appointed by the Dean of the Graduate School. It is recommended that the supervisory committee be appointed as early as possible after the student has been admitted to doctoral work and in general not later than the end of the first semester of study. The Graduate Dean is an ex officio member of all supervisory committees.

The duties of the supervisory committee are as follows:

1. To inform the student of all regulations governing the degree sought. It should be noted that this does not absolve the student from the responsibility for informing himself concerning these regulations. (See *Student Responsibility.*)
2. To meet immediately after appointment to pass on the qualifications of the student and to discuss and approve a program of study for him.
3. To meet to discuss and approve the proposed dissertation project and the plans for carrying it out.
4. To conduct the qualifying examination, or, in those cases where the examination is administered by the department, to take part in it.
5. To meet when the work on the dissertation is at least one-half completed to

review procedure, progress, and expected results and to make suggestions for completion.

6. To meet when the dissertation is completed to conduct the final oral examination and to satisfy itself that the dissertation is a piece of original research and a contribution to knowledge.

Language Requirement.—Except as noted below, a reading knowledge of two languages other than English is required. These languages will normally be French and German, but they may be any languages which can be shown to be of significant use in the field of study in which the student is taking his degree. However, a combination of two modern Romance languages is not permitted. In all cases where the language chosen is other than French or German, the student will be required to justify his choice and to obtain the approval of his supervisory committee, his college, and the Graduate Council. Justification of choice will be accomplished by showing the existence of an acceptably sizable or rapidly growing body of relevant scholarly material in the language in question.

As an alternative to a reading knowledge of two languages other than English, a candidate for this degree may substitute a functional knowledge of one such language. A functional knowledge of a language is understood to mean the ability to read, write, and speak that language with reasonable ease and accuracy. This alternative is subject to the approval of the student's supervisory committee and college as well as the Graduate Council, and is permitted only when the knowledge of the language chosen can be shown to be needed in the preparation of the dissertation. For students in the Latin American Area Studies Program special requirements apply.

Knowledge of the languages presented will be tested and certified by the Department of Foreign Languages or by individuals or groups approved by this department. Where it is necessary for the examination to be conducted by individuals from outside the University, any expense involved will be borne by the student.

In certain departments individually approved by the Graduate Council (Business Administration and Agricultural Economics), a study of mathematics may be substituted for a reading knowledge of one foreign language. When this substitution is chosen, the courses in mathematics taken for this purpose may not be considered a part of the major or minor studies. The degree of proficiency in mathematics shall be determined as follows:

1. For a field in which calculus is not included through the master's degree, the student shall take and pass with a "B" or better the final examination in MS. 354 and any other courses in the Department of Mathematics specified by his supervisory committee.
2. For a field in which calculus is included as a part of the bachelor's or master's program, the student shall either pass with a "B" or better, or demonstrate equivalent proficiency by written examination in 6 semester hours of work in the Department of Mathematics requiring MS. 354 as a normal prerequisite.

The language requirement should be met as early as possible in the student's program and must be met before the student can be admitted to the qualifying examination.

Residence.—(1) The minimum residence requirement is three academic years of full-time resident graduate study, or equivalent, at institutions approved by the Graduate School. Either the second or the third academic year of the three-year program must be spent in full-time study (except as noted in the following paragraph) on the

campus of the University of Florida. Candidates in Agronomy, Animal Husbandry, Horticulture, Plant Pathology, and Soils may do their research at certain branch stations of the University of Florida Agricultural Experiment Station where adequate staff and facilities are available.

(2) In calculating residence, part-time study is evaluated on the basis of 15 semester hours as equal to a full load. Part-time study may be substituted for the year of full-time study stipulated in the preceding paragraph in either of the following proportions: (a) 30 semester hours earned in one calendar year; (b) 35 semester hours in four successive registrations (either including or excluding summer session registrations). An overload program, even when approved, will be valued as a normal program in meeting this residence requirement.

(3) Between the qualifying examination and the conferring of the degree, there must elapse a minimum of one academic year if the candidate is in full-time residence, or one full calendar year if the candidate is on less than a full-time basis.

Qualifying Examination.—The qualifying examination, which is required of all candidates for the degree of Doctor of Philosophy, may be taken during the second term of the second year of graduate study. The examination, conducted by the special supervisory committee, with the aid of the major and minor departments, is both written and oral and covers the major and minor subjects. The supervisory committee has the responsibility at this time of deciding whether the student is qualified to go on with work toward the Ph.D. degree.

If the student fails in his qualifying examination, he will not be given a re-examination unless for special reasons such an examination is recommended by his supervisory committee and approved by the Graduate Council. At least a semester of additional preparation is considered essential before re-examination.

Time Limit.—All work for the doctor's degree must be completed within five calendar years after the qualifying examination or this examination must be repeated.

Admission to Candidacy.—A graduate student does not become an actual candidate for the Ph.D. degree until he has been formally admitted to candidacy. Such admission requires the approval of the student's supervisory committee, the head of his department, his college dean, and the Dean of the Graduate School, and the approval must be based on (1) the academic record of the student, (2) the opinion of his supervisory committee concerning his over-all fitness for candidacy, and (3) a qualifying examination as described above. Application for admission to candidacy should be made at about the end of the second or the beginning of the third year of graduate study.

Dissertation.—A satisfactory dissertation showing independent investigation and research is required of all candidates. Since all doctoral dissertations will be published by microfilm, microcard, or printing, it is necessary that the work be of publishable quality and that it be in form appropriate for publication. The original copy of the dissertation must be presented to the Graduate Dean on or before the date specified in the University Calendar. The sum of $50 must be deposited with the Business Manager to cover the cost of publication as explained below.

Publication of Dissertation.—Candidates for the Ph.D. and Ed.D. degrees may choose among the following three alternatives in the publication of their dissertations

(1) Microfilm publication. In this case the University will refund $30 of the the deposit as soon as the dissertation has been accepted and the final examination passed.

(2) Microcard publication. In this case the University will determine the cost

of publication and either return any un-needed portion of the deposit or bill the student for any excess in cost above $50.

(3) Two-year postponement. The student may request a two-year period to investigate possibilites of publication by printing. If the dissertation is published as a book or monograph in essentially complete form, the Graduate Council will consider a request for refund of the entire deposit upon receipt of five copies of the published work. At the end of the two-year period, unless evidence of acceptance of the dissertation for such publication has been presented, the Graduate Council will authorize publication by microfilm as indicated under (1) above.

Copyright.—Under (1) above the student may choose to copyright his thesis before publication. The charge involved will be deducted from the $50 deposit before refund can be arranged.

Final Examination.—After the acceptance of the dissertation and the completion of all other prescribed work for the degree, but in no case earlier than six months before the conferring of the degree, the candidate will be given a final examination, oral or written or both, by his supervisory committee. Satisfactory performance on this examination completes all requirements for the degree.

SPECIAL PROGRAMS

CANCER RESEARCH

The courses, seminars and research problems of the Cancer Research Laboratory, a unit of the J. Hillis Miller Health Center, will coordinate the knowledge the student acquires in basic or special courses and focus it on the cancer problem. The several options listed in Part 2 are to develop special skills in one or more fields as well as to supply perspective and develop critical judgment.

Twenty-four semester hours of course work and 6 semester hours of research are required for the master's degree. At least 18 of these must be in the courses listed in Part 1. At least 6 hours should be in a related minor field. (Group a, b, or c of Part 2). A reading knowledge of German is required. In addition to the course work, the student will be required to prepare and present a thesis acceptable to the supervisory committee.

For the degree Doctor of Philosophy 24 hours in Part 1 must be completed and at least 24 credits chosen from one of the groups or at least 12 credits in each of two groups in Part 2. The candidate must present a dissertation in Cancer Research that represents an original contribution to the knowledge of the subject and of sufficient scope to fulfill the residence requirement for the degree. In addition, he must prepare the essential material of his thesis in a form suitable for publication in a standard scientific journal. A reading knowledge of French and German is required. Residence and other requirements for the Ph.D. degree are covered elsewhere.

Part 1

CR. 660.—Dyes and Vital Stains in Medical Research. 3 credits.
CR. 661.—Chemical Carcinogenesis. 3 credits
CR. 662.—The Biochemistry of Cancer. 3 credits.
CR. 665-666.—Cancer Seminars. 3 credits each.
CR. 678.—Fundamentals of General and Cancer Cytology. 3 credits.
CR. 699.—Research and Thesis. 0 to 6 credits.

CR. 799.—Research and Dissertation. 1 to 12 credits.
CR. 676.—Selected Topics in the Biology and Physiology of Cancer. 3 credits.
CR. 770.—Oncology. 3 credits.

For the master's degree each student will have a research problem that is part of a larger project. A definite research contribution is expected and only those students who have shown creative ability in their master's work will be allowed to enter as candidates for the doctor's degree.

Part 2

In this part there are three options designed to develop special ability (a) biology and biochemistry, (b) biochemistry and chemistry, or (c) mathematics, biophysics and physical chemistry. For the Ph.D. degree 24 credits may be chosen from one, or 12 credits from each of two option. Not more than six credits may be in courses numbered below 600. For specific information, consult the Director, Cancer Research Laboratory.

Part 3

Courses prescribed by the candidate's supervisory committee to make up deficiencies in his previous training. No credit.

GRADUATE PROGRAM IN THE MEDICAL SCIENCES

The departments of anatomy, biochemistry, microbiology, and physiology in the College of Medicine offer an opportunity for the graduate student to pursue study and research leading to an advanced degree in the basic medical sciences.

SCHOOL OF INTER-AMERICAN STUDIES

This School, headed by a Director, who acts as Chairman of the Special Graduate Faculty in Inter-American Studies, operates at the graduate level in accordance with the standards of the University Graduate School and Graduate Council. Its Director and members of the faculties will advise the students at the graduate level in conformity with the regulations of the Graduate School.

The general inter-American program of the University embraces all phases of University work and is carried out cooperatively with existing units in the various areas. A special Inter-American Area Study Program is offered to properly qualified students at the master's and doctor's level. For further details regarding the School of Inter-American Studies, see General Index.

The School of Inter-American Studies has available graduate fellowships and scholarships, and it awards annually a medal presented by the Eloy Alfaro International Foundation.

Inter-American Area Study Program Leading to Master of Arts Degree

The purpose of this program is to give the student a broad understanding of inter-American affairs. With this objective in mind, a graduate supervisory committee counsels on the selection of courses for the individual student.

Among the departments or colleges offering course work in the Inter-American Area Program are: Agricultural Economics, Agronomy, Anthropology and Archeology, Art, Bacteriology, Biology (Zoology), Botany, Business Organization and Operation, Engineering, Economics, Education, English, Entomology, Forestry, Geography, Geology, History, Horticulture, Journalism, Law, Music, Philosophy, Plant Pathology, Political Science, Portuguese (Brazilian), Sociology, Soils, Spanish, and Speech.

Prerequisites for the Master of Arts degree in this area are:

1. The completion of at least 12 semester hours of undergraduate courses in inter-American subjects. (For area study majors in Arts and Sciences, and in Business Administration, see General Index.)
2. A reading knowledge of Spanish or Portuguese, depending upon the major area of the student's interest.

Requirements for graduation include:

1. The completion of a major of at least 12 semester hours of graduate courses in one of the above listed departments and colleges.
2. The completion of at least 12 semester hours of related studies which will meet the minimum requirement for a minor in the Graduate School and which is approved by the graduate supervisory committee.
3. The completion of a satisfactory thesis on an inter-American topic in the field of the major department, for which six hours of credit are given.
4. Students in this program should demonstrate an ability to understand spoken Spanish or Portuguese and to carry on a simple conversation in one of these languages.

Inter-American Area Study Program Leading to the Degree of Doctor of Philosophy

For students approved for registration leading to the degree of Doctor of Philosophy, a carefully integrated sequence of academic work to meet the specific needs of the individual student will be outlined by a special supervisory committee. Before the appointment of the supervisory committee, the selection of a program of study may be initiated by the student in consultation with the Director of the School of Inter-American Studies. In every case the final program must be approved by the student's supervisory committee acting under the policies established by the Special Graduate Faculty for Inter-American Area Studies as approved by the Graduate Council.

GRADUATE PROGRAM IN PUBLIC ADMINISTRATION

Graduate work is offered leading to various fields of public employment. Three training sequences are outlined herein:

Management Sequence.—Advisor for the major field is in the Department of Political Science. Training in this area is offered leading to positions in city manager government, and for state and federal civil service requirements. The major will be a concentration of public administration courses within the field of political science. A minor or minors may be taken in economics (concentration in public finance), accounting, or other areas.

Finance Sequence.—Advisor of the major field is the graduate advisor for the College of Business Administration. Courses in this sequence include public finance courses applicable toward a major. Accounting courses are also recommended. Training is designed for those applying for positions in fiscal departments of state, county, and federal government.

Public Management and the Public Schools.—Advisors are those for graduate students in business administration, educational administration, and public administration (political science).

This sequence is designed to train only business managers in the public schools. Those interested in principalships, supervisory positions, etc., should follow the regular sequence for majors in education. Business managers of public schools are concerned with purchasing, contracting, reporting of fiscal procedures and forms to the state educational officials, etc. Major and minor sequences in economics (public finance and accounting), educational administration and public administration (political science) are offered. Students with undergraduate sequences in accounting and business are encouraged to consider this program.

All sequences will include 30 semester hours of work including a thesis. The major is 12 to 18 semester hours and the minor is 6 to 12 hours, at least 6 of which must be in one field. The thesis normally covers 6 semester hours of research.

STATISTICAL LABORATORY

The Statistical Laboratory of the University, an independent budgetary unit reporting through the Director of Research, was established in the fall of 1951, and is located in Building OE. At present, the staff includes a Director, consulting statisticians, an assistant in research, a tabulating supervisor, and a number of keypunch and other machine operators. With the installation of an IBM 650 electronic computer currently on order, the data processing capacity of the Laboratory will be greatly increased.

The principal functions of the Laboratory are:

1. To aid research by furnishing consulting services for the faculty, staff, graduate students and others.
2. To carry on investigations in the theory and application of statistics.
3. To conduct research under contract or other arrangements for university, federal, state, and other governmental agencies, as well as for foundations and individuals.
4. To assist in coordinating and developing a more complete statistical research program for the University.
5. To provide machine computation and tabulating facilities for other educational and research units of the University.

The Laboratory as now organized is primarily a research unit, though members of its staff teach statistical courses in other departments. Thesis work may be carried on in the laboratory.

GRADUATE PROGRAM IN COMMUNITY PLANNING

A two-year graduate program is offered leading to the degree Master of Science in Community Planning. The work is administered by the Graduate Faculty in Community Planning, and inter-departmental faculty representing the agencies, departments, and colleges of the University concerned with urban and rural planning.

The program provides opportunity for qualified students to develop and to combine an understanding of the inter-related physical, social, and economic problems of communities with technical knowledge which will fit them to serve with city, county, state, regional, or other public planning agencies, or in the offices of private planning consultants.

To be admitted to the graduate professional program in Community Planning, an applicant must be eligible for admission to the Graduate School, must have aptitude and adequate preparation to enter upon graduate study in planning, and must show satisfactory promise of ability to pursue advanced study and research. Ordinarily, it is

expected that the undergraduate background will be in the professional curricula or in the social sciences, and that students will have undergraduate degrees in fields such as agriculture, architecture, economics, engineering, forestry, geography, landscape architecture, law, political science, public administration, real estate, sociology, or related disciplines.

For the graduate program leading to the master's degree in this field, there is no fixed pattern of courses. Rather, the student is guided by his faculty advisors in working out an individual program suited to his background which will best fit him to take his place in the community planning field. The work consists of a minimum of 60 semester hours, including a thesis in planning. Normally 24 semester hours will be in specific courses in Community Planning, and the remainder in related departments and in the thesis. The Graduate Faculty in Community Planning recognizes the importance of practical experience to professional students in planning, and encourages students to undertake field work with public planning agencies or private practitioners under regulations established by the Faculty.

PROGRAM IN VOCATIONAL REHABILITATION

The degree of Master of Rehabilitation Counseling as an inter-disciplinary program established to give students professional and technical training designed to aid in the rehabilitation of physically and mentally handicapped persons. The diversity of activities performed by individuals in the various state, federal, and private agencies who bear the designation rehabilitation counselor necessitates a program that is general in nature and diversified in character. The fundamental purpose of the program therefore, is to present a systematic and integrated study of the basic knowledge and skills needed by the rehabilitation counselor.

The minimum course requirement is 36 semester hours, of which 18 hours represents required work in courses and practicum specifically designated as rehabilitation courses. An additional minimum of 18 hours is selected from designated courses, i.e., 6 hours in each of the following areas: (1) Testing and Measurement, (2) Personality Development, and (3) Counseling. The selection of the 6 hours in each of the three areas is made on the basis of meeting the individual needs of the student and subject to the approval of a supervisory committee. Students who have previous education in one or more of these areas will be permitted to substitute other appropriate courses. Those who lack previous educational background in these areas will be required to take additional work before undertaking this program. At least 50 per cent of the minimum course requirements shall be from courses numbered 600 and above. The remainder may be at the 300, 400 and 500 levels. A thesis is not required. A reading knowledge of a foreign language is not required.

Supervisory Committee.—A committee of five members of the faculty representing the College of Education, College of Medicine, Department of Psychology, Department of Sociology, with a professor in rehabilitation counseling serving as chairman, and the Dean of the Graduate School as an ex officio member, will supervise the work of students registered in this program.

Admission to Candidacy.—Admission to candidacy will be recommended by the supervisory committee and approved by the College of Education and the Graduate School. The supervisory committee becomes the interdisciplinary body to determine the application of established policy to the individual student and to be responsible for the direction of the program. Admission to the work of this program is not a guarantee that the student will be admitted to candidacy for the degree.

Final Examination.—A thesis is not required for the degree Master of Rehabilitation Counseling but the candidate must pass a final examination at the close of his course work. This written and/or oral examination will be administered by the supervisory committee and will be confined largely to the student's major field of study.

RESEARCH PROGRAM AT THE OAK RIDGE INSTITUTE OF NUCLEAR STUDIES

The University of Florida is one of the Sponsoring Universities of the Oak Ridge Institute of Nuclear Studies located at Oak Ridge, Tennessee. Through this cooperative association with the Institute, our Graduate Research Program has at its disposal all the facilities of the National Laboratories in Oak Ridge and of the research staffs of these laboratories. When a master's or doctoral candidate has completed his resident work, it is possible, by special arrangement, for him to go to Oak Ridge to complete his research problem and prepare a thesis. In addition, it is possible for the staff members of this University to go to Oak Ridge for varying periods, usually not less than three months, for advanced study in their particular fields. Thus, both staff and students may keep abreast of the most modern and up-to-date developments in atomic and nuclear research that is in progress at the Oak Ridge laboratories.

The students will go to Oak Ridge on Oak Ridge Graduate Fellowships which have varying stipends determined by the number of dependents they have and the level of work that they are doing. Staff members may work in Oak Ridge on stipends commensurate with their present salary and rank.

A copy of the bulletin and announcement of the Graduate Training Program of the Oak Ridge Institute of Nuclear Studies is available in the office of the Dean of the Graduate School. Should you be interested, ask for this bulletin at his office, and he will be glad to assist you in making an application for an Oak Ridge Fellowship. If you prefer you may request a bulletin by writing to the Chairman of the University Relations Division of the Oak Ridge Institute of Nuclear Studies, Box 117, Oak Ridge, Tennessee.

All arrangements for these fellowships will be made between the Dean of the Graduate School and the Institute of Nuclear Studies.

FLORIDA POST-GRADUATE CERTIFICATES

For regulations governing the securing of recommendations for the Florida Post-Graduate Certificate and the Advanced Post-Graduate Certificate, consult the Office of Graduate Studies in Education, 132 Yonge Building.

BASIC COMPREHENSIVE COURSES OF THE UNIVERSITY COLLEGE

C-1

Instructional Staff 1956-57

Carleton, W. G., Chairman; Atchley, M. H., Baringer, W. E., Bault, R. Q., Beth, L. P., Chalmers, D. M., Davis, R. P., Doherty, H. J., Doty, F. A., Dovell, J. E., Finkle, J. L., Frederick, W. C., Granberry, J. M., Hamblen, C. H., Hammond, E. A., Hanna, P. L., Kantor, H., Kelsay, R. G., Lewis, H. G., McDowell, W. B., Mason, B. B., Osborn, G. C., Parkins, I. W., Price, J. E., Proctor, S., Pyle, G. B., Quackenbush, O. F., Rakove, M. L., Robbins, C. L., Thompson, A. W., Webber, I. L., Wolff, G. E., Yalem, R. J., Yearley, C. K.

C-1. (11-12).—American Institutions. 4 hours per week throughout the year. 8 credits. Offered 1, 2, 3.

Designed to develop and stimulate the ability to interpret the interrelated problems confronting American institutions. The unequal rates of change in technology, in economic life, in government, in family life, in education, and in religion are analyzed and interpreted to show the need for a more effective co-ordination of the factors of our evolving social organizations of today. Careful scrutiny is made of the changing functions of our institutions as joint interdependent activities so that a consciousness of the significant relationships between the individual and social institutions may be developed, from which consciousness a greater degree of social adjustment may be achieved.

C-2

Instructional Staff 1956-57

Knowles, H. L., Chairman; Bault, R. Q., Bunting, D. C., Cross, C. I., Day, R. L., Dunkle, J. R., Dyer, D. R., Edwards, R. A., Furman, W. L., Greiner, J. W., Marcus, R. B., Moore, W. I., Mundy, B. W., Nolting, J. P., Omer, G. C., Pirkle, E. C., Poole, L. A., Rappenecker, C., Roberts, L. H., Sawyer, E. M., Tunison, P. B., Yoho, W. H.

C-2. (21-22).—The Physical Sciences. 3 or more hours per week throughout the year. 6 credits. Offered 1, 2, 3.

The primary aim of the course is to give the student a working knowledge, through the solution of numerous problems, of the physical factors in the environment which affect the development of civilization, with its various cultures. These factors are primarily space relations, weather and climate, landforms, and material and energy resources. The concepts are taken from the fields of astronomy, physical geography, meteorology and climatology, geology, chemistry, and physics.

C-3

Instructional Staff 1956-57

Wise, J. Hooper, Chairman; Baughan, D. E., Baumgartner, J. F., Beirne, R. M., Bigelow, G. E., Boone, L. P., Bowers, R. H., Jr., Bradshaw, J. P., Childers, W. C., Clark, W. A., Congleton, J. E., Constans, H. P., Crist, R. L., Cutler, R. J., Derrick, C., Dow, E. W., Dusenbury, W. L., Fogle, S. F., Gehan, F. E., Greer, A. W., Hallam, G. W., Hamblen, C. H., Harkness, D. R., Harris, D. P., Hart, T. A. E., Hodges, J. R., Johnson, I., Kemp, T. G., Kirkland, E. C., Langford, A. G., Lee, R. C., MacLeod, M. L., McHughston, R. W., Morris, A. C., Mounts, C. E., Neale, J. R., Jr., Ormond, W. N.,

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The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

Penrod, J. A., Sims, J. H., Snipes, W. C., Spache, G. D., Stryker, P. D., Trowbridge, C. W., Walker, B. H., Warfel, H. R., Wilson, J. L.

C-3. (31-32).—Reading, Speaking, and Writing—Freshman English. 4 or more hours per week throughout the year. 8 credits. Offered 1, 2, 3.

A comprehensive English course, designed to enlarge the student's store of ideas and meanings and to increase his efficiency in the communication arts—reading, writing, speaking, and listening. The course provides regular practice in oral and silent reading, in thought analysis, in improving the form and style of written and oral expression, in extending the vocabulary, and in making effective use of the body and voice in speaking. Students are encouraged to read widely as a means of broadening their interests and increasing their ability to communicate effectively.

Sections of C-3 are reserved for students studying English as a second language. Graduates of preparatory schools in which the principal language is English or students who have college credit in English cannot receive credit in these sections of C-3.

In addition to the comprehensive freshman English program and EH. 133 and 134, C-3 maintains the Reading Laboratory and Clinic, which offers assistance to those desiring aid in overcoming reading handicaps. Off-campus applicants for this service should communicate with Professor G. D. Spache, Room 310, Anderson Hall. The Speech and Hearing Clinic, sponsored by the Florida Center of Clinical Services, serves students who need special help in the correction of speech and hearing difficulty.

EH. 133.—Effective Writing. 3 hours. 3 credits. Prerequisite: C-3, or permission of C-3 Course Chairman. Offered 1, 2.

Designed to aid the student to present his ideas in writing which is not only accurate and clear but pleasing and attractive to the reader. Students are encouraged to do creative work.

EH. 134.—Contemporary Reading. 3 hours. 3 credits. Prerequisite: C-3, or permission of C-3 Course Chairman. Offered 2.

Designed to aid the student in planning for himself a well-rounded program in reading, which will serve to keep him abreast of the best in contemporary thought. Some time will be spent in introducing each student to the bibliography and writing in the area of his special profession or vocational interest.

C-41

Instructional Staff 1956-57

Wilson, W. H., Chairman; Andry, C. F., Bass, W. A., Bentley, G. R., Cox, E. H., Elliott, H. H., Fain, J. T., Haines, L. F., Harkness, D. R., Hetenyi, L. J., Moore, W. E., Pait, J. A., Sadler, S. G., Skoglund, H. L., Tilley, W. H.

C-41.—Practical Logic. 3 hours per week during one semester. 3 credits Offered 1, 2, 3.

The principal aims are (1) to develop ability to think with greater thoroughness and (2) to develop ability to evaluate the thinking of others. The material used applies to actual living and working conditions. The case method is used to insure practice, and numerous exercises are assigned.

C-42

Instructional Staff 1956-57

Kokomoor, F. W., Chairman; Ackerson, R. H., Awtrey, R. A., Blake, R. G., Butson, A. T., Cowan, R. W., Gager, W. A., Hadlock, E. H., Hutcherson, W. R., Lang,

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

G. B., Lehman, E. H., Lewis, H. K., McInnis, S. W., Meacham, R. C., Meyer, H. A., Moore, J. T., Moore, T. O., Morales, J. A., Myers, F. C., Patterson, P. B., Phipps, C. G., Pirenian, Z. M., Rohde, F. V., Sadler, S. G., Savige, J. L., Smith, C. B., Sobczyk, A., South, D. E., Thoro, C. C.

C-42.—Fundamental Mathematics. 3 or more hours per week during one semester. 3 credits. Offered 1, 2, 3.

A practical elementary course consisting of the subject matter considered most useful for students who do not plan necessarily to specialize in mathematics. It covers the development of the number system, computation with approximate and exact numbers, algebra as a generalization of arithmetic, practical geometry, functional relationships, logarithms, the simple trigonometry of the triangle, simple and compound interest, and annuities. Not open to students who have completed Basic Mathematics.

C-5

Instructional Staff 1956-57

Davidson, R. F., Chairman; Bigelow, G. E., Boyd, M., Brown, J. C., Carson, R. E., Chalmers, D. M., Derrick, C., Elliott, H., Graeffe, A. D., Groth, J. H., Hanson, B., Hart, F. H., Hart, T. A. E., Hetenyi, L. J., Johnson, Irmgard, Miller, C. J., Oras, A., Pait, J. A., Penrod, J. A., Ruff, W., Sievers, A. M., Skoglund, H. L., Starr, N. C., Storer, M. B., Tilley, W. H., Vowles, R. B., Wathen, L. J.

C-5. (51-52).—The Humanities. 4 hours per week throughout the year. 8 credits. Offered 1, 2, 3.

A course designed to acquaint the student with the great literature, philosophy, art and music in Western Civilization. Both our cultural heritage and the culture of our own day are studied. Major emphasis is placed upon mature understanding, enlarged appreciation, and a philosophy of life adequate for the needs of our age.

C-6

Instructional Staff 1956-57

Byers, C. F., Chairman; Auffenberg, W. A., Berner, L., Bovee, E. C., Briggs, J. C., Brodkorb, P., Brookbank, J. W., DeWitt, R. M., Dickinson, J. C., Jr., Freeman, J. R., Goin, C. G., Gregg, J. H., Griffith, M. M., Haubrich, R. R., Haynes, C. D., Hunter, G. W., III, Hussey, R. F., Kilby, J. D., Laessle, A. M., Layne, J. N., Leavitt, B. B., MacCurdy, R. D., Pierce, E. L., Redmond, J. R., Reimer, W. J., Wallace, H. K., Wallbrunn, H. M., Westfall, M. J., Wilder, C. D., Jr., Yount, J. L.

C-6. (61-62).—Biological Science. 3 hours per week throughout the year. 6 credits. Offered 1, 2, 3.

The biological problems and principles associated with man as an animal in the world of life. The human organism will be considered as an individual, a member of a race, a product of the evolutionary process, and as a unit of a socially and economically interrelated complex of living organisms. Under these headings such topics as the structure and functioning of the human body, human reproduction, heredity and variation, the theory of evolution, human races, and the principles of ecology are discussed in light of knowledge derived from a study of the biological world as well as of man himself.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session

DEPARTMENTAL COURSES

ACCOUNTING

Instructional Staff 1956-57

Lanham, J. S., Head; Almeida, J. S., Anderson, C. A., Anderson, W. H., Benninger, L. J., Carson, M., DaVault, J. W., Deinzer, H. T., Devine, C. T., Dinman, R., Moore, J. F., Peterson, E. G., Pye, M. L., Ray, D. D.

Courses numbered 300 and higher are open only to students with junior standing. Note, however, the prerequisites for certain courses.

ATG. 211.—Elementary Accounting. 3 hours. 3 credits. The first half of the course ATG. 211-212. Offered 1, 2, 3.

The basic training in business practice and in accounting. A study of business papers and records; recording transactions; preparation of financial statements and reports.

ATG. 212.—Elementary Accounting. 3 hours. 3 credits. The second half of the course ATG. 211-212. Offered 1, 2, 3.

ATG. 214.—Federal Income Taxes for Individuals. 3 hours. 3 credits. Offered 1 and 2.

The Internal Revenue Code, regulations and cases which apply to the determination and taxation of incomes of individuals. Limited in scope to fundamentals of the law and its application to fairly simple situations. Consideration given to income, deductions, withholding rates, returns, declarations and filing. Designed for the general student. Students majoring in accounting take ATG. 414 instead of this course.

ATG. 311.—Accounting Principles. 3 hours. 3 credits. Prerequisite: ATG. 212. Offered 1, 2, 3.

The mechanical and statistical aspects of accounting; books of record; accounts; fiscal period and adjustments; working papers; form and preparation of financial statements; followed by an intensive and critical study of the problems of valuation as they affect the preparation of the balance sheet and income statements.

ATG. 312.—Accounting Principles. 3 hours. 3 credits. Prerequisite: ATG. 311. Offered 1, 2, 3.

The legal aspects of accounting and related problems resulting from the legal organization form used by businesses; liabilities; proprietorship; corporations; capital stock; surplus; followed by a study of the financial aspects of accounting as disclosed by an analysis and interpretation of financial statements; financial ratios and standards, their preparation, meaning and use.

ATG. 313.—Cost Accounting. 3 hours. 3 credits. Prerequisite: ATG. 212. Offered 1, 2, 3.

The methods of collection, classification, and interpretation of cost data; special problems, standard costs, cost systems, use of cost data in business control.

ATG. 318.—Resort, Club and Hotel Accounting. 3 hours. 3 credits. Prerequisite: ATG. 212. Offered 1.

A study of accounting principles applicable to resorts, clubs, and hotels. While a knowledge of records and their operation is fundamental, emphasis is placed upon the

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accumulation of operating cost data, their analysis, and methods of reporting for managerial uses.

ATG. 319.—Machine Applications. 3 hours. 3 credits. Prerequisite: ATG. 212. Offered 1, 2.

Machine application in accounting procedures and processes. A survey of machine uses and applications ranging from simple devices, through punched card operations and including study of electronic devices by means of lectures, discussions, problems, demonstrations, and visits to punched card equipment and the IBM 650 electronic computer.

ATG. 410.—Managerial Accounting and Budgeting. 3 hours. 3 credits. Prerequisite: ATG. 212. Offered 2.

Development, analysis, and preparation of reports and schedules from accounting data used by business executives to determine and measure effect of business policies and courses of actions of management. Principles, problems and techniques of budgetary procedure and control form an important part of this course.

ATG. 411.—Advanced Accounting. Problems. 3 hours. 3 credits. Prerequisite: ATG. 312. Offered 1, 2, 3.

Specialized accounting problems; partnerships; statement of affairs; consignments; installments; ventures; insurance and other related subjects.

ATG. 412.—Principles of Auditing. 3 hours. 3 credits. Prerequisite: ATG. 312. Offered 1, 2, 3.

Auditing theory and current auditing practice; principal kinds of audits and services of the public accountant; professional and ethical aspects of auditing.

ATG. 413.—Advanced Accounting Systems. 3 hours. 3 credits. Prerequisite or corequisite. ATG. 312. Offered 1.

The business problems involved in the creation and operation of accounting systems. Exercises in the analysis of existing systems in business and industry, and complete reports thereon are required.

ATG. 414.—Income Tax Accounting. 3 hours. 3 credits. Prerequisite: ATG. 311. Offered 1, 2, 3.

A study of the federal income tax law and related accounting problems. Determination of gross income and of deductions is studied for taxpayers generally. The course emphasizes this process for individuals. Practice is provided in the preparation of returns for individuals, and in the use of the loose-leaf income tax service.

ATG. 415.—Corporate Accounting Problems. 3 hours. 3 credits. Prerequisite: ATG. 411. Offered 1, 2, 3.

The corporate accounting problems concerning consolidation, reorganization, quasi-reorganization, mergers and voluntary and involuntary liquidations.

ATG. 416.—Internal Auditing. 3 hours. 3 credits. Prerequisite: ATG. 312. Offered 2.

The principles and procedures by which a firm systematically examines its books and records to ascertain or verify and report on the facts regarding its operating techniques, financial position and its financial operations.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ATG. 417.—Governmental Accounting. 3 hours. 3 credits. Prerequisite or corequisite: ATG. 311. Offered 1, 2, 3.

The basic principles underlying governmental and institutional accounting. Detailed consideration is given to the operation of recommended types of funds, the budget process, account structure, tax accounting for cities, and the utilization of accounting in the preparation of significant reports.

ATG. 418.—Advanced Accounting. Problems. 3 hours. 3 credits. Prerequisite: ATG. 312. Offered 1.

A continuation of specialized accounting problems; receiverships; foreign exchange; stock brokerage; estates and trusts; budgets; business taxes; consolidation and merger; and other problems usually covered in the C.P.A. examinations.

ATG. 419.—Controllership Accounting. 3 hours. 3 credits. Prerequisite or corequisite: ATG. 312 except for majors in management. Offered 1, 2.

The accounting and administrative functions and the managerial responsibilities of the chief accounting and reports officer of the modern business enterprise.

ATG. 512.—Advanced Auditing. 3 hours. 3 credits. Prerequisite: ATG. 412. Offered 2.

Advanced work in auditing theory and practice emphasizing auditing standards and reports. An audit practice case will be completed by each student.

ATG. 518.—Accounting Reports. 3 hours. 3 credits. Prerequisite: ATG. 412. Offered 1.

Compilation of material and writing of accountants' reports; the form and content of reports for audits and special investigations, reports to the Securities and Exchange Commission, and other specialized forms of accountants' reports; the development of clear, concise phraseology.

ATG. 519.—C.P.A. Problems. 3 hours. 3 credits. Prerequisite: ATG. 418. Offered 2.

A critical analysis of theories and technics involved in the solution of advanced accounting problems containing complex situations faced by public accountants and candidates for the C. P. A. examinations.

ATG. 590.—Survey of Accounting. 3 hours. No credit. Offered 2.

This is a survey course in accounting designed to give graduate students a basic understanding of the principles and functions of the subject. Principles governing the determination of income, the valuation of assets, accounting for creditor's and owner's equities, accounting for corporation securities, analysis and interpretation of accounting reports, and the relationship of accounting to economics comprise the main body of the subject matter. Some attention is given the principles of cost analysis, governmental accounting, the function of the auditor, and income tax accounting.

ATG. 593.—Advanced Cost Accounting. 3 hours. 3 credits. Prerequisite: ATG. 313. Offered 1.

Advanced work in cost accounting emphasizing managerial uses, standard cost procedures, and distribution cost analysis.

ATG. 594.—Advanced Income Tax Accounting. 3 hours. 3 credits. Prerequisite: ATG. 414. Offered 2.

A continuation course in the study of the federal income tax law and related accounting problems. Particular attention is given to the determination of net income

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

for partnerships, estates and trusts, and corporations. Consideration is given also to corporate reorganizations, special surtaxes on corporations, and taxpayers' relations with administrative authorities. The student will become familiar with the computations required in the determination of federal estate and gift taxes. Practice is provided in the preparation of returns, and in the use of loose-leaf tax services.

GRADUATE COURSES

Though no graduate major may be completed without adequate course work on the 600 or higher level, certain undergraduate courses in accounting are available for graduate credit as a part of a candidate's major. These are: ATG. 410.—Managerial Accounting and Budgeting; ATG. 413.—Advanced Accounting Systems; ATG. 414—Income Tax Accounting; ATG. 415.—Corporate Accounting Problems; ATG. 416.—Internal Auditing; ATG. 417.—Governmental Accounting; ATG. 418.—Advanced Accounting Problems; ATG. 419.—Controllership Accounting; ATG. 591.—Advanced Auditing; ATG. 593.—Advanced Cost Accounting; ATG. 594.—Advanced Income Tax Accounting; ATG. 519.—C.P.A. Problems.

ATG. 611.—Accounting Theory. 3 hours. 3 credits. Prerequisite: ATG. 411. Offered 1, 3.

Theory behind accounting functions in their relation to the business enterprise.

ATG. 612.—Public Accounting: Problems and Reports. 3 hours. 3 credits. Prerequisite: ATG. 412. Offered 1.

Some of the leading problems in the field of public accounting, including the services offered, the need for the manner of regulation of the profession, requirements for success in the profession, liabilities of public accountants, criteria for evaluating auditing standards, and the formulation of audit reports. Use is made of selected case studies. Consideration is also given to the relation of public accounting to other professions, and attention is directed to the bibliography of the field.

ATG. 613.—Cost and Budgetary Accounting. 3 hours. 3 credits. Prerequisites: ATG. 313, ATG. 411, and ATG. 412. Offered 1, 3.

An analysis of complex cost problems, managerial use of cost reports in management and budget preparation, as well as the design and installation of cost systems.

ATG. 614.—Federal Income Tax Accounting. 3 hours. 3 credits. Prerequisite: ATG. 414. Offered 2, 3.

This seminar course emphasizes both individual initative and cooperative effort in the study of income tax accounting. Research tools available to the income tax practitioner are explored and applied. Substantive materials include relationships between tax accounting and business income accounting generally. The position of the accountant in tax practice is analyzed and appraised. This course requires some original search for the application of income tax standards.

ATG. 617.—Advanced Governmental Accounting. 3 hours. 3 credits. Prerequisite: ATG. 417. Offered 2.

This course deals with accounting and budgeting at three levels of government, local, state and national. The treatments at the latter two levels are necessarily of a survey character, designed to provide perspective for students planning to enter public accounting or government. The study of local government accounting and budgeting involves the development of individual knowledge and competency through intensive reading.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ATG. 699.—Research and Master's Thesis. Variable registration. 0 to 6 credits. Offered 1, 2, 3.

Directed research and writing for the M.A. degree, taken toward the end of the student's graduate program for credit in addition to the 24 hours required for the master's degree.

ATG. 718.—Evolution of Accounting Theory and Practice. 3 hours. 3 credits. Prerequisite: ATG. 411. Offered 2.

Development of accounting principles and practices and their relation to economics, law and finance.

ATG. 799.—Research and Doctoral Dissertation. Variable registration. 1 to 12 credits. Offered 1, 2, 3.

Directed research and writing for the Ph.D. degree, taken toward the end of the student's graduate program for credit in addition to the hours of regular courses required by the candidate's supervisory committee for the Doctor's degree. The Doctor's degree in the College of Business Administration requires a major study in economics. However, with approval of the student's supervisory committee the subject of the dissertation may be in the field of accounting.

AERONAUTICAL ENGINEERING

Instructional Staff 1956-57

Hoover, J. W., Interim Head; Miller, W. H.

AN. 286.—Introductory Aerodynamics. 3 hours. 3 credits. Prerequisite: PS. 205, MS. 353. Corequisites: PS. 206, EM. 365, MS. 354. Offered 2, 3.

Classification and Requirements of Aircraft. The atmosphere, fundamental dynamics and thermodynamics of air; types of fluid flow, airfoil theory; wing theory; propeller theory. Dommasch, Sherby, Connolly, *Airplane Aerodynamics.*

AN. 381.—Intermediate Aerodynamics. 3 hours. 3 credits. Prerequisites: EM. 365, AN. 286. Corequisites: EM. 366, ML. 385. Offered 1.

Drag calculations; engine-propeller characteristics; performance calculation; theory and design of control surfaces; longitudinal, directional, and lateral stability calculations; aerodynamic problems. Dommasch, Sherby, Connolly, *Airplane Aerodynamics.*

AN. 382.—Aerodynamics. 3 hours. 3 credits. Offered 2.

Prerequisite: AN 381. An introduction to supersonic aerodynamics, nozzle flow, normal and oblique shocks, two and three dimensional flow. Pope, *Aerodynamics* of *Supersonic Flight.*

AN. 383.—Subsonic Wind Tunnel Laboratory. 3 hours laboratory. 1 credit. Corequisite: AN. 381. Offered 1.

Subsonic wind tunnel experimentation. Experiments on tunnel calibration, boundary layer survey, wake survey, pressure distribution, force measurement on models, turbulence. Methods and equipment used in aerodynamics research. Pope, *Wind Tunnel Testing.*

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

AN. 384.—Flight and Supersonic Wind Tunnel Laboratory. 3 hours laboratory. 1 credit. Corequisite: AN. 382. Offered 2.

Supersonic wind tunnel experimentation. Schlieren shock observations and pressure measurements in supersonic flow. Study and practice of the technique of flight testing. Flight experiments on rate of climb, stability, stall characteristics. Pope, *Wind Tunnel Testing.*

AN. 385.—Aircraft Materials and Processes. 3 hours. 3 credits. Corequisite or prerequisite: CY. 217 or CY. 121. Offered 1.

Aircraft materials, their physical properties, specifications and uses. A study of special manufacturing processes used in the aircraft industry. Titterton, *Aircraft Materials and Processes.* Periodicals, trade literature, and films.

AN. 390.—Aircraft Propulsion. 3 hours. 3 credits. Corequisite: AN. 382. Offered 2.

An introduction to the problems of aircraft propulsion. Study of various propulsion devices, including engine propeller combinations, turbo-jets, athodyds and rockets. Casamassa, *Jet Power Plant Systems*; selected notes.

AN. 485.—Airplane Design. 1 hour. 6 hours laboratory. 3 credits. Prerequisites: AN. 382, AN. 385, AN. 390. Corequisite: AN. 487. Offered 1.

Preliminary aircraft design procedure, airplane characteristics and design criteria, useful load, power plant selection; weight and balance estimates; cockpit and cabin arrangements; design of wing, fuselage, landing gear, tail surfaces, control systems; power plant installation design; performance, stability and strength calculations for specific design; principles of layout and detail design. Corning, *Airplane Design*; selected notes.

AN. 486.—Airplane Design. 1 hour. 6 hours laboratory. 3 credits. Prerequisite: AN. 485. Corequisite: AN. 488. The second half of the course AN. 485-486. Offered 2.

AN. 487.—Aircraft Structural Analysis. 4 hours. 4 credits. Prerequisites: EM. 366, EM. 367, CL. 368. Offered 1.

Principles of analysis of aircraft structures, including static and dynamic loadings, deflections, indeterminate structures, bending and shear stresses in thin web beams and shells, torsion, shear flow in multicellular structures. Steinbacher and Gerard, *Aircraft Structural Mechanics.*

AN. 488.—Aircraft Structures. 4 hours. 4 credits. Prerequisites: AN. 487. Offered 2.

Instability of columns, thin flat plates, thin-walled compression elements. Analysis and design of shear beams. Steinbacher and Gerard, *Aircraft Structural Mechanics.*

AN. 491.—Seminar. 1 hour. 1 credit. Corequisite: Senior Engineering Classification. Offered 1.

A seminar period devoted to student presentation of special topics of Aeronautical Engineering, professional procedure and conduct. Peabody, *How to Speak Effectively.*

AN. 492.—Seminar. 1 hour. 1 credit. Corequisite: Senior Engineering Classification. The second half of the course AN. 491-492. Offered 2.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

AN. 493.—Aircraft Stress Laboratory. 3 hours laboratory. 1 credit. Corequisite: AN. 487. Offered 1.

Familiarity with methods of aircraft structural load measurement and laboratory instruments for accomplishing it. Experiments illustrating basic fundamentals, such as load in trusses, dynamic load factors, shear and bending stresses. Electric strain gage equipment and techniques are used where applicable. Mimeographed notes.

AN. 494.—Aircraft Structures Laboratory. 3 hours laboratory. 1 credit. Prerequisite: AN. 493. Corequisite: AN. 488. Offered 2.

Experimental study of the strength of typical aircraft structural elements; columns, torque boxes, shear and semi-tension field webs. Effect of elevated temperatures on strength of aircraft materials. Mimeographed notes.

AN. 495.—Elementary Aircraft Flutter and Vibration. 2 hours. 2 credits. Prerequisites: EM. 366-367, MS. 521 or MS. 420. Offered 1.

Elementary vibrating systems. Isolation and soundproofing. Several degrees of freedom. Beams and wings. Flutter and buffeting. Freeberg and Kemler, *Aircraft Flutter and Vibration,* selected notes.

GRADUATE COURSES

AN. 681.—Advanced Aeronautical Design. 3 credits. Prerequisites: AN. 485-486, AN. 381-383, AN. 487-488.

Advanced aeronautical design projects.

AN. 682.—Advanced Aeronautcial Design. 3 credits. The second half of the course AN. 681-682. Prerequisite: AN. 681.

AN. 683.—Aeronautical Research. 3 credits. Prerequisites: AN. 485-486, AN. 487-488, AN. 382-383.

Advanced aeronautical research projects.

AN. 684.—Aeronautical Research. 3 credits. The second half of the course AN. 683-684. Prerequisite: AN. 683.

AN. 685.—Advanced Aerodynamics. 3 credits. Prerequisites: AN. 381-382, AN. 383-384. Offered 1, 2.

Advanced study of aerodynamics.

AN. 686.—Supersonic Aerodynamics. 3 credits. Prerequisites: AN. 381-382, AN. 383-384. Offered 1, 2.

Supersonic aerodynamic theory. Duct flow, shock relations, approximate and exact theories, supersonic tunnels, three dimensional flow, airfoils in supersonic flow.

AN. 691.—Special Topics in Aeronautical Engineering. Variable credit. Offered 1, 2.

Laboratory, lectures, or conferences covering specially selected topics in Aeronautical Engineering.

AN. 692.—Special Topics in Aeronautical Engineering. Variable Credit. The second half of the course AN. 691-692. Offered 1, 2.

AN. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

AGRICULTURAL CHEMISTRY

Instructional Staff 1956-57

Sisler, H. H., Head; Anthony, D. S., Stearns, T. W.

ACY. 208.—Agricultural Biochemistry. 3 hours. 3 credits. Prerequisites: CY. 121-122 or equivalent. Offered 1.

An introductory course in organic chemistry and biochemistry, especially for agricultural students.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

ACY. 531.—Agricultural Analysis. 2 hours, and 3 or 6 hours laboratory. 3 or 4 credits. The first half of ACY. 531-532. Prerequisite: CY. 331 or its equivalent. Offered 1.

Quantitative analysis of agricultural products.

ACY. 532.—Agricultural Analysis. 2 hours, and 3 or 6 hours laboratory. 3 or 4 credits. The second half of ACY. 531-532. Offered 2.

GRADUATE COURSES

Prerequisites: See Department of Chemistry.

ACY. 641.—Biochemistry.* 3 hours or its equivalent. 3 credits. The first half of the course ACY. 641-642. Prerequisite: Organic Chemistry. Offered 1.

A general survey course in Biochemistry for graduate students, and for undergraduates by special permission of the instructor.

ACY. 642.—Biochemistry.* 3 hours or its equivalent. 3 credits. The second half of the course ACY. 641-642. Offered 2.

ACY. 643.—Biochemistry Laboratory. 3 hours. 1 credit. The first half of the course ACY. 643-644. Prerequisite or corequisite: ACY. 641. Offered 1.

Accompanying laboratory course for ACY. 641.

ACY. 644.—Biochemistry Laboratory. 3 hours. 1 credit. The second half of the course ACY. 643-644. Prerequisite or corequisite: ACY. 642. Offered 2.

Accompanying laboratory course for ACY. 642.

ACY. 699.—Research and Master's Thesis. 0-6 semester hours. Offered 1, 2, 3.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.
*For additional biochemistry courses see listing under Chemistry Department.

AGRICULTURAL ECONOMICS

Instructional Staff 1956-57

Hamilton, H. G., Head; Brooke, D. L., Cake, E. W., Godwin, M. R., Greene, R. E. L., Greenman, J. R., McPherson, W. K., Roberts, Keith, Savage, Zach, Spurlock, A. H., Smith, C. N.

AS. 201.—Principles of Agricultural Economics. 3 hours. 3 credits. Offered 1, 2, 3.

An introduction to the field of agricultural economics; principles of economics as applied to agriculture; economic problems of the agricultural industry and the individual farmer.

AS. 302.—Agricultural Resources. 3 hours. 3 credits. Offered 1.

Factors that determine the agriculture of a region. Potentialities and limitations of agricultural production in the various regions of the United States and the world. International trade in agricultural products.

AS. 303.—Farm Records. 2 hours, and 2 hours laboratory. 3 credits. Offered 1.

Methods and practice of making farm inventories, keeping financial records, and feed and crop records.

AS. 304.—Farm Finance and Appraisal. 3 hours. 3 credits. Offered 2, 3.

Volume, sources and uses of agricultural credit in Florida and the United States. The principles of credit and problems peculiar to financing farmers and farmers' associations. One field trip usually required.

AS. 306.—Farm Management. 3 hours. 3 credits. Not open to freshmen. Offered 1, 2, 3.

Introduction to the principles of farm management. Types of farming in Florida and the United States, and factors which determine types of farming. The causes of success and failure of farms and farmers. Problems of labor, machinery, layout of farms, farm reorganization, and such.

AS. 308.—Marketing. 3 hours. 3 credits. Offered 1, 2, 3.

Basic principles of marketing with emphasis placed on market functions, services, and organizations; elementary theory of demand and prices; commodity exchanges and futures trading; transportation; grades and standards; market news; methods of increasing efficiency of markets; the role of co-ops and government in marketing. One field trip required.

AS. 310.—Agricultural Statistics. 3 hours. 3 credits. Offered 1.

The principles involved in the collection, tabulation and interpretation of agricultural statistics.

AS. 311.—Rural Law. 2 hours. 2 credits. Offered 1.

How laws are made and the kinds of law. Contracts and real property law and their application to the purchase of farm property. Landlord-tenant, employer-employee, and debtor-creditor relationships. Consideration of farm boundaries, fences, stock laws, and other laws of special interest to farmers.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

AS. 403.—Advanced Farm Management. 3 hours. 3 credits. Offered 1.

Principles of production economics as applied to the management of a farm; general farm management principles; management by types of farming in Florida.

AS. 405.—Agricultural Prices. 3 hours. 3 credits. Prerequisite: AS. 201 or AS. 308; or consent of instructor. Offered 1.

The course concentrates on the major factors that affect agricultural prices; on agricultural booms and depressions; on the relationship of national income, income distribution, government expenditures, taxation, banking and interest rates to agricultural prices; on agricultural marketing agreements; price supports; agricultural and non-agricultural investments; most important of all the course attempts to bridge the gap between economic theory and agricultural business in the real world.

AS. 408.—Marketing Fruits and Vegetables. 3 hours. 3 credits. Prerequisite: AS. 201 or consent of instructor. Offered 2.

A study of the methods of assembling, transporting, wholesaling and retailing vegetables and citrus fruits; economic aspects of grades and standards for fruits and vegetables; legal and operating aspects of controlled marketing programs; and a review of the legislation governing transactions in the fruit and vegetable industry. A two-day field trip to observe marketing operations in various sections of the state is required.

AS. 409.—Cooperative Marketing. 3 hours. 3 credits. Offered 1.

Cooperative buying and selling organizations, their successes and failures. Methods of organization, financing, and business management. A two-day field trip is required.

AS. 411.—Advanced Agricultural Statistics. 3 hours. 3 credits. Prerequisite: AS. 310. Offered 2.

Analysis of statistical procedures used by the U. S. Department of Agriculture, other governmental and private agencies in collecting and analyzing data.

AS. 412.—Land Economics. 3 hours. 3 credits. Prerequisite: Consent of Instructor. Offered 1.

The significance of decreasing land-population ratios; the nature of economic land; economics of land utilization; land classifications; problems in the use of agricultural range, arid forest, and recreational land; economic aspects of water utilization. One field trip is required.

AS. 413.—Agricultural Policy. 3 hours. 3 credits. Offered 2, 3.

A history of farmer attempts and accomplishments through organization and legislation to improve the economic and social status of agriculture. The basic problems and concepts involved in developing and carrying out an agricultural policy. Evaluation of present legislative programs and policies affecting the farmer.

AS. 414.—Terminal Markets and Commodity Exchanges. 8 hours discussion preceding and 4 hours discussion following field trip. 1 credit. Prerequisite or corequisite: AS. 308 or consent of instructor. Offered 2.

An extensive study of the terminal market organizations and facilities for agricultural products, including the commodity exchanges. Visitation and inspection of firms and facilities in large terminal markets in the East or Midwest will entail a field trip of from eight to ten days. This field trip will be taken during the interim between the fall and spring semesters. A deposit of $50.00 for a laboratory field trip is required at the time of registration. Any amount not actually used for transportation cost will be refunded. An additional sum may be required at the time that the trip is made. Participation in this course is contingent upon notifying the instructor of intention to register not later than the beginning of the examination period for the fall term.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

AS. 420.—Marketing of Livestock. 3 hours. 3 credits. Prerequisite: One course in economics or nine hours of animal husbandry. Offered 2.

A study of economic principles as applied in the marketing of livestock products and livestock including the characteristics of supply and demand, how prices are determined and discovered, the cyclic nature of livestock and meat prices, and the functions and services performed by marketing firms and agencies.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

AS. 501.—Research Problems in Land Economics. 3 credits. Prerequisite: consent of instructor. Offered 1, 2, 3.

Economic problems created by the continually changing uses of land resources, i.e., water, soil, timber, climate, situs, will be studied. Each student will select a problem, outline and conduct research on that problem and prepare a written report. Students majoring in other departments will be encouraged to select problems that will help them evaluate the economic and social impact of the progress being made in other fields of learning, on the natural resource base, i.e., animal husbandry, agronomy, soils, forestry, community planning, Latin American programs, etc.

AS. 513.—Successful Marketing Firms. 1 hour and 6 hours laboratory. 3 credits. Offered 1.

A study of successful marketing firms. Eight one-day field trips are required.

AS. 520.—Sampling Methods. Identical with AY. 520. 3 hours. 3 credits. Prerequisites: AS. 310, or AY. 452. Offered 1.

Presentation of the following topics with emphasis on application: completely random, stratified random, systematic, cluster, multi-stage and area sampling; ratio and regression estimates; optimum sample size; and variances of estimates.

GRADUATE COURSES

The student as a rule will have received his B.S. degree in agriculture from a college of recognized standing. A graduate student who has not completed in his undergraduate study ES. 407, ES. 408, AS. 310 and AS. 411 or their equivalents will be required to take these courses or their equivalents as a part of his advanced degree. A student working for his Ph.D. degree who has not already taken MS. 105 and MS. 106 or their equivalents will be required to take these courses.

AS. 601.—Argicultural Economics Seminar. 1 ½ hours. No credit. Offered 1.

Weekly meetings are held for the purpose of discussing major economic problems existing in agriculture and proposed research work by staff members and graduate students. Frequently leaders in the field of industry, government, and education are invited to participate in the discussion. All graduate students in the Department are expected to attend the seminar, present problems and participate in a critical examination of problems others present.

AS. 602.—Agricultural Economics Seminar. 1 ½ hours. No credit. Offered 2. Second half of AS. 601.

AS. 603.—Economics of Agricultural Production. 3 hours. 3 credits. Prerequisite: AS. 403 or equivalent. Offered 1.

A study of economic principles in relation to all phases of the management of a farm, and in relation to the management of the major types of farming in the United States.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

AS. 604.—Economics of Agricultural Production. 3 hours. 3 credits. Prerequisite: AS. 603. Offered 2. Second half of AS. 603.

AS. 605.—Research Problems in Farm Management. 3 hours. 3 credits. Offered 1, 2, 3.

Designed to train students in collecting, analyzing and presenting data on problems in the field of farm management. Special problems of interest to the individual student and agreeable with the instructor are selected for study. A statement of the problem is prepared, research work studied, publications reviewed and written reports developed.

AS. 608.—Land Economics. 3 hours. 3 credits. Prerequisite: AS. 412 or equivalent. Offered 2.

An intensive examination of the alternative uses of agricultural land with special emphasis on capital investments and managerial arrangements that will expand the production of agricultural products in proportion with the rate of population increase.

AS. 611.—Research Problems in Marketing Agricultural Products. 3 hours. 3 credits. Offered 1, 2, 3.

Individual examinations of segments of the marketing system for Florida products. Emphasis may be placed on efficiency, market organization, trading arrangements, historical development or other aspects of the problem of interest to the student and agreeable with the instructor. A comprehensive report on the investigations and conclusions of the student is required.

AS. 614.—Advanced Marketing of Agricultural Products. 3 hours. 3 credits. Offered 1.

Economic evaluation of State and Federal regulatory marketing laws, particularly with reference to agricultural products of Florida.

AS. 615.—National and International Agricultural Programs. 3 hours. 3 credits. Prerequisite: AS. 614. or equivalent. Offered 2.

Economic evaluation of domestic, foreign and intergovernmental programs on the agricultural welfare of the nation.

AS. 616.—Research Methods and Techniques in Agricultural Economics. 3 hours. 3 credits. Offered 1.

Concepts of research dealing largely with the application of the scientific method in planning and conducting research in the field of agricultural economics. Consideration is given to developing scientific concepts, planning and investigation, development and use of questionnaires, sampling, control groups, gathering data, tabulation of data, analysis and presentation of results.

AS. 617.—Farm Tenure. 3 hours. 3 credits. Prerequisite: AS. 412 or equivalent. Offered 1.

Tenure patterns, operation of farms under various degrees of tenure, leasing arrangements, landlord-tenant relationships, legal aspects of tenure, tenure and public policy, the effect of industrialization and mechanization on tenure, and public ownership and control of land, methods of land acquisition and effect of variations in physical resources on farm tenure.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

AS. 618.—Research Methods in Marketing Farm Products. 2 hours. 2 credits. Prerequisite: AS. 616. Offered 2.

A study of research and problems in conducting research in the field of marketing farm products; review of the literature; application of findings; and planning of research projects.

AS. 619.—Research Methods in Farm Management. 2 hours. 2 credits. Offered 2.

A discussion of research problems in farm management; review of the literature; application of findings; and planning of research projects.

AS. 620.—The Application of Statistical Theory to the Collection and Analysis of Agricultural Data. 2 hours, and 3 hours laboratory. 3 credits. Prerequisites: AS. 310 and 411 or equivalent. Offered 1.

A study of the theory and techniques of statistics as applied to agricultural fields.

AS. 621.—Sampling Theory. 3 hours. 3 credits. Prerequisites: AS. 310 and MS. 619. Offered 2.

A theoretical treatment of the topics presented in AS. 520.

AS. 628.—Problems in Statistics. Indentical with AY. 628. 1 to 3 credits per semester. Offered 1, 2, 3.

For description see AY. 628.

AS. 650.—Statistical Methods in Research. Identical with AY. 650. 3 hours. 3 credits. Offered 1.

For description see AY. 650.

AS. 651.—Econometric Methods in Agriculture. 3 hours. 3 credits. Prerequisites: AS. 650 and ES. 408. Offered 2.

A discussion of the use of statistics and economic theory in quantitative research. Special attention is given to the construction of econometric models, to the estimation of the parameters involved to specification error and to assaying the usefulness of the models.

AS. 699.—Research and Master's Thesis. 0-6 credits. Offered 1, 2, 3.

AS. 799.—Research and Doctoral Dissertation. 1-12 credits. Offered 1, 2, 3.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

AGRICULTURAL ENGINEERING

Instructional Staff 1956-57

Rogers, F., Head; Choate, R. E., Richardson, J. B., Rogers, C. J.

AG. 301.—Drainage and Irrigation. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite: C-42 or MS. 105. Offered 1, 2, 3.

The drainage and irrigation of lands with treatment of the necessity for such in the production of field, fruit, and vegetable crops. The cost, design, operation and upkeep of drainage and irrigation systems. Field work in laying out systems.

AG. 302.—Farm Motors. 2 hours, and 2 hours laboratory. 3 credits. Offered 1, 2, 3.

The general principles of operation of the various sources of farm power. The care, operation, and repair of electric motors, internal combustion engines (including automobile, stationary gasoline engines, truck and tractor), and windmills. Laboratory work includes actual operation and repair.

AG. 303.—Farm Shop. 2 hours, and 2 hours laboratory. 3 credits. Offered 1, 2, 3.

The farm shop jobs that are common to the farms of Florida. Carpentry, concrete construction, light forging, soldering, tool care and repair are some of the jobs given special emphasis. Laboratory work includes actual shop practice.

AG. 306.—Farm Machinery. 2 hours, and 2 hours laboratory. 3 credits. Offered 1, 2, 3.

The operation, care, and repair of farm implements designed to give the student a fundamental knowledge of the various machines commonly used on the farm.

AG. 401.—Farm Structures. 2 hours, and 2 hours laboratory. 3 credits. Offered 1, 2, 3.

The functional requirements, design, cost, construction, and the structural analysis of farm buildings with some training in the preparation of blueprints.

AG. 402.—Farm Concrete. 1 hour, and 2 hours laboratory. 2 credits. Offered 2.

The coloring, curing, mixing, placing, proportioning, reinforcing and waterproofing of concrete for farm use. Consideration of materials suitable for farm concrete work.

AG. 403.—Agricultural Engineering Investigations. 2 hours. 2 credits. The first half of the course AG. 403-404. Offered 1, 3.

Assigned reading and reports of recent developments in the field of agricultural engineering.

AG. 404.—Agricultural Engineering Investigations. 2 hours. 2 credits. The second half of the course AG. 403-404. Offered 2.

AG. 406.—Dairy Engineering. 2 hours, and 2 hours laboratory. 3 credits. Offered 1.

The machinery and power used in the manufacture and storage of dairy products. Shop operations necessary to operation of dairy plant considered.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

AG. 407.—Farm Shop Power Equipment. 1 hour, and 4 hours laboratory. 3 credits. Offered 1, 2, 3.

The care, operation and repair of both metal and woodworking power shop equipment used in the construction and repair of farm buildings and equipment.

AG. 408.—Soil and Water Conservation. Identical with SLS. 408. 2 hours, and 2 hours laboratory. 3 credits. Prerequisites: SLS. 301, AG. 301, Prerequisite or corequisite: SLS. 302. Offered 2. (For description see SLS. 408.).

AG. 409.—Seminar. 1 hour. 1 credit. Offered 2.

Discussions of current developments in the field of agricultural engineering.

AG. 411.—Farm Refrigeration. 2 hours, and 2 hours laboratory. 3 credits. Prerequisites: CY. 121-122, PS. 110 or equivalent. Offered 2.

Designed to give students in agriculture a practical course in refrigeration which will enable them to handle farm refrigeration problems.

GRADUATE COURSES

Prerequisites: Bachelor's degree in Agriculture or Agricultural Engineering. A minimum of twenty semester hours in Agricultural Engineering.

AG. 601.—Seminar. 2 hours. 2 credits. Offered 1, 2.

Agricultural engineering problems with a review of the literature. Required of all graduate students registered in the department.

AG. 670.—Research. 3 to 6 credits in any one semester. Offered 1, 2, 3.

Special problems in agricultural engineering.

AG. 671.—Research Problems in Irrigation. 3 credits in any one semester. Offered 1, 2, 3.

AG. 672.—Research Problems in Farm Machinery and Power. 3 credits in any one semester. Offered 1, 2.

AG. 673.—Research Problems in Farm Structures. 3 credits in any one semester. Offered 1, 2, 3.

AG. 699.—Research and Master's Thesis. 0 to 6 credits in any one semester. Offered 1, 2, 3.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

AGRICULTURAL EXTENSION

Instructional Staff 1956-57

Senn, P. H., Head; Hampson, C. M., Watkins, M. O.

AXT. 301.—Rural Leadership. 3 hours. 3 credits. Prerequisite: Junior standing. Offered 2.

The duties of county agricultural agents and other rural leaders. Trains students to meet the public, interest farmers, conduct meetings, demonstrate good farming practices, plan programs, manage an office, and secure cooperation.

AXT. 407.—Agricultural Extension Youth Programs. 3 hours. 3 credits. Prerequisite: Junior standing. Offered 2.

Designed to train students to develop and conduct 4-H Boys' and Girls' Club work and other Extension rural youth programs.

AXT. 421.—Problems in Agricultural Extension Methods. 3 to 6 credits. Prerequisite: AXT. 301, or AXT. 407, or consent of instructor. Offered 2.

Problems selected from the fields of Agricultural Extension workers, including 4-H Club work, demonstrations, and farm and home management.

GRADUATE COURSE

AXT. 621.—Research in Agricultural Extension. 3 credits per semester, maximum 6 credits. Prerequisite: AXT. 301, or AXT. 407, or consent of instructor. Offered 2, 3.

Library and workshop relating to Agricultural Extension methods. Research work is studied, publications reviewed and written reports developed.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

AGRONOMY

Instructional Staff 1956-57

Senn, P. H., Head; Carver, W. A., Chew, V., Edwardson, J. R., Harris, H. C., Horner, E. S., Hoveland, C. S., Hull, F. H., Killinger, G. B., McCloud, D. E., Nutter, G. C., Rodgers, E. G., Ruelke, O. C., Wallace, A. T., Wofford, I. M.

AY. 221.—General Field Crops. 2 hours, and 2 hours laboratory. 3 credits. Offered 1.

Grain, fiber, sugar, peanut, tobacco, forage and miscellaneous field crops, with special emphasis on varieties and practices recommended for southern United States. History, botanical characteristics, soil and climate adaptations, fertilization, cultural practices, growing processes, harvesting, uses, and rotation systems are discussed.

AY. 324.—Forage and Cover Crops. 2 hours, and 2 hours laboratory. 3 credits. Offered 2, 3.

Plants that produce feed for livestock. Methods of growing and utilizing forage crops. Plants suited for cover and conservation programs.

AY. 329.—Genetics. 3 hours. 3 credits. Offered 1, 3.

The fundamentals of inheritance, emphasizing the application of genetics and its associated branches of science in the improvement of economic plants and animals and in programs for human betterment.

AY. 331.—Genetics Laboratory. 4 hours laboratory. 2 credits. Offered 1.

Laboratory methods in the application of genetic principles, with breeding experiments which illustrate the laws of inheritance. Designed to be taken in conjunction with AY. 329.

AY. 422.—Plant Breeding. 2 hours, and 2 hours laboratory. 3 credits. Prerequisites: BTY. 101-102 and AY. 329 or equivalent. Offered 2.

The fundamental principles of plant improvement. Field practice in artificial pollination, hybridization, and field plot techniques acquaint the student with modern methods employed in plant breeding.

AY. 426.—Individual Problems in Agronomy. 2 hours reference or laboratory work per credit. Variable credit. Prerequisites: AY. 221, AY. 324 or permission of instructor. Offered 1, 2, 3.

Individual problems selected from the fields of crop production, genetics, or plant breeding.

AY. 432.—Seed Production and Processing. 1 hour, and 2 hours laboratory. 2 credits. Prerequisites: AY. 221, AY. 324, BTY. 101-102. Offered 1.

Production, inspection, handling and storage of seed stocks. Germination, identification and purity tests. Laws and regulations of the seed trade.

AY. 436.—Pastures. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite: AY. 324. Offered 2.

The development and management of grazing areas of southeastern United States, with particular reference to Florida conditions. Importance of pastures in present day agriculture and management for greater economic returns.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

AY. 442.—Weed Control. 2 hours, and 2 hours laboratory. 3 credits. Prerequisites: AY. 211, AY. 324, BTY. 101-102, CY. 121-122. Offered 2.

Weed identification, competition with crop plants, and mechanical, cultural and chemical methods of weed control with particular reference to Florida conditions.

AY. 452.—Experimental Methods. 2 hours, and 2 hours laboratory. 3 credits. Offered 1.

Introduction to methods employed in field plot, greenhouse, and laboratory research and to analysis of experimental data.

AY. 492.—Agronomy Seminar. 1 hour. 1 credit. Offered 1.

Selected readings, reports and discussions of current agronomic developments. Required of all students majoring in agronomy.

COURSE FOR ADVANCED UNDERGRADUATES AND GRADUATES

AY. 520.—Sampling Methods. Identical with AS. 520. 3 hours. 3 credits. Prerequisite: AY. 452 or AS. 310. Offered 1.

(For description see AS. 520.)

GRADUATE COURSES

AY. 626.—Agronomic Problems. 3 credits per semester, maximum 9 credits. Offered 1, 2, 3.

Library, laboratory, or field studies which relate to crop production and improvement. Experiments are studied, publications reviewed and written reports developed.

AY. 627.—Problems in Genetics and Cytogenetics. 2 credits per semester, maximum 6 credits. Offered 1, 2, 3.

Modern methods applied to specific genetic or cytogenetic research problems.

AY. 628.—Problems in Statistics. Identical with AS. 628. 1 to 3 credits per semester. Prerequisite: A graduate course in statistics. Offered 1, 2, 3.

Special problems in statistics, in the areas of research methods, sampling methods, experimental design, theory of sampling and theory of experimental designs.

AY. 635.—Crop Ecology. 2 hours, and 3 hours laboratory. 3 credits. Offered 1.

Influences of environmental factors such as soil, moisture, temperature, etc., on growth of crop plants and ecological distribution of agronomic crops.

AY. 641.—Crop Nutrition. 1 hour, and 3 hours laboratory. 2 credits. Prerequisites: BTY. 211, CY. 362, SLS. 302, and consent of instructor. Offered 2.

Nutritional influences on differentiation, composition, growth, and yield of crop plants. Deficiency symptoms and diagnostic techniques are studied and current literature is reviewed.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

AY. 650.—Statistical Methods in Research. Identical with AS. 650. 3 hours. 3 credits. Prerequisite: An introductory course in statistics or consent of instructor. Offered 1.

Measures of location, variation and covariation. Observed and theoretical frequency distributions. Point and interval estimates and tests of significance. Analysis of variance. Linear, non-linear, simple and multiple regression. Simple experimental designs. Goodness of fit and contingency tables.

AY. 651.—Design of Experiments. 3 hours. 3 credits. Prerequisite: AY. 650 or equivalent. Offered 2.

Completely randomized, randomized block, Latin square, split plot, crossover, factorial and incomplete block designs. Point and interval estimation and tests of significance. Orthogonal comparisons, multiple comparisons, confounding, missing plot estimation and variance components. Applications to problems in research.

AY. 652.—Theory of Regression and Introductory Theory of Experimental Designs. 3 hours. 3 credits. Prerequisites: AY. 650 and MS. 620 or consent of instructor. Offered 1.

General regression analysis. Basic assumptions of least squares. Estimation and tests of hypotheses. Computational methods. Orthogonal polynomials. Introductory theory of experimental design models: randomized blocks, Latin squares, factorial experiments, split plots and analyses of covariance. Variance components: estimation and tests of significance. Theory illustrated with practical applications throughout.

AY. 653.—Theory of Experimental Designs. 3 hours. 3 credits. Prerequisite: AY. 652. Offered 2.

Theory of experimental design models: complete-block and incomplete block designs. Variance components, mixed models, recovery of interblock information. Special topics: missing plot estimation, effects of inadequacies in models, transformation of data.

AY. 660.—Cytogenetics. 1 hour, and 3 hours laboratory. 2 credits. Prerequisites: Basic courses in genetics and microtechnique and consent of instructor. Offered 2.

Physical basis of genetic variation with emphasis on the co-relation of cytological and genetic concepts.

AY. 662.—Advanced Genetics. 3 hours. 3 credits. Prerequisites: AY. 329 and AY. 422 or AL. 322 (AY. 660 desirable). Offered 2.

Advanced genetic concepts, with emphasis on the genetic bases for breeding procedures.

AY. 665.—Advanced Plant Breeding. 3 hours. 3 credits. Prerequisites: AY. 329, AY. 422, AY. 651, and AY. 662. Offered 1.

An advanced study of principles and concepts of inheritance with methods of application to plant breeding.

AY. 682.—Genetics Seminar. 1 credit per semester, maximum 3 credits. Offered 1.

Review and discussion of current literature and developments in the field of genetics.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

AY. 692.—Graduate Agronomy Seminar. 1 credit per semester, maximum 3 credits. Offered 2.

Review and discussion of current literature and studies of agronomic problems.

AY. 699.—Research and Master's Thesis. 0 to 6 semester credits. Offered 1, 2, 3.

AY. 799.—Research and Doctoral Dissertation. 1 to 12 semester credits. Offered 1, 2, 3.

ANIMAL HUSBANDRY AND NUTRITION

Instructional Staff 1956-57

Cunha, T. J., Head; Arrington, L. R., Combs, G. E., Davis, G. K., Feaster, J. P., Hentges, J. F., Jr., Koger, M., Loggins, P. E., Palmer, A. Z., Shirley, R. L., Wallace, H. D., Warnick, A. C., Wakeman, D. L.

AL. 309.—General Animal Husbandry. 2 hours, and 2 hours laboratory. 3 credits. Offered 1, 2, 3.

Types and breeds of farm animals, market classification, selection and management.

AL. 310.—Modern Breeds and Pedigrees of Livestock. 2 hours. 2 credits. Prerequisite: AL. 309. Offered 2.

Evaluation of pedigrees, families and breed characteristics of beef cattle, sheep, horses and swine.

AL. 312.—Feeds and Feeding. 3 hours, and 2 hours laboratory. 4 credits. Prerequisites: CY. 121-122 and ACY. 208. Offered 2.

Composition of plants and animals; feeding standards and rations for farm animals and poultry.

AL. 314.—Livestock Judging. 4 hours laboratory. 2 credits. Prerequisite: AL. 309. Offered 1.

Special training in livestock judging; presentation of reasons, show ring procedure, identification and names of parts of animals.

AL. 316.—Elementary Livestock Management. 4 hours laboratory. 2 credits. Offered 1 and 2.

Basic livestock management practices of beef cattle, swine and sheep.

AL. 322.—Animal Breeding. 3 hours, and 2 hours laboratory. 4 credits. Prerequisites: AL. 309, BLY. 181, AY. 329. Offered 2.

Principles of breeding and genetics applied to animals; pedigrees, records, and breed history.

AL. 411.—Beef Production. 2 hours, and 3 hours laboratory. 3 credits. Prerequisite: AL. 312. Offered 2.

Beef cattle production and management.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

AL. 413.—Swine Production. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite: AL. 312. Offered 1, 2.

Selection, feeding and management of hogs; forage crops and grazing, disease and parasite control.

AL. 414.—Sheep Production. 1 hour, and 2 hours laboratory. 2 credits. Prerequisite: AL. 312. Offered 2.

Sheep production and management in Florida and the United States, marketing and wool grading.

AL. 415.—Meats and Meat Products. 1 hour, and 4 hours laboratory. 3 credits. Offered 1, 2.

Slaughtering, cutting, curing, and processing meat.

AL. 419.—Horse Husbandry. 1 hour, and 2 hours laboratory. 2 credits. Prerequisite: AL. 312. Offered 2.

Horse and mule production. General management of horses and their use on the farm and range.

AL. 421.—Seminar. 1 hour. 1 credit. Prerequisite: Senior Classification. Offered 1.

Preparation and presentation of papers on an approved subject of major interest.

AL. 425.—Advanced Livestock Judging. 6 hours laboratory. 3 credits. Prerequisite: AL. 314. Offered 2.

Study in breeds, selection for breeding, fitting, and showing.

AL. 426.—Livestock Feeding. 3 hours. 3 credits. Prerequisite: AL. 312. Offered 2.

Nutritive requirements of beef cattle, swine, sheep, and horses with emphasis on meeting these needs in Florida.

AL. 427.—Elementary Nutrition. 3 hours, and 2 hours laboratory. 4 credits. Prerequisite: AL. 312 or permission of instructor. Offered 1.

An elementary study of carbohydrates, fats, proteins, minerals, and vitamins and their function in the animal body.

AL. 428.—Advanced Livestock Selection and Appraisal. 6 hours laboratory. 3 credits. Prerequisites: AL. 314, and AL. 425. Registration by permission only. Offered 1.

Study of methods to develop proficiency in the selection and appraisal of beef cattle, swine, sheep, horses, and mules.

AL. 429.—Meat Selection and Grading. 4 hours laboratory. 2 credits. Prerequisite: AL. 415. Offered 1.

Fundamentals in grading and classifying carcasses and cuts of meat from beef, pork, and lamb. Includes field trips to packing plants and exercises in practical grading and selection.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

GRADUATE COURSES

Prerequisites: Twenty-four hours of approved undergraduate work in animal husbandry, CY. 121-122, a course in organic chemistry, and BLY. 181.

Experimental problems and thesis are required for advanced degree with a major in animal husbandry and nutrition. Consent of instructor must be obtained before enrolling in graduate courses.

AL. 601.—Special Topics in Animal Science. 3 hours. 3 credits. Offered 1, 2, 3.

Reviews and Discussions of Scientific Literature in the Field of Animal Science.

AL. 603.—Animal Nutrition. 3 hours. 3 credits. Offered 2.

Relative Composition, Digestion, and Utilization of Feedstuffs; Protein, Energy, Vitamin, and Mineral Elements in Nutrition.

AL. 605.—Experimental Techniques and Analytical Procedures in Meats Research. 1 hour, and 4 hours laboratory. 3 credits. Offered 2.

Experimental Design, Analytical Procedures and Techniques; Carcass Measurements and Analysis as Related to Livestock Production and Meat Studies.

AL. 607.—Physiology of Reproduction. 2 hours, and 3 hours laboratory. 3 credits. Offered 1.

Anatomy, Histology and Physiology of Genital Organs. Estrous cycle changes in the female. Semen production in the male and artificial insemination.

AL. 608.—Genetics of Animal Improvement. 3 hours. 3 credits. Prerequisite: AL. 322 or equivalent and permission of instructor. Offered 2.

Genetic structure of populations. Factors governing gene and zygotic frequencies. Conditions of equilibrium. Statistical description of population, heritability, and genetic consequences of selection.

AL. 609.—Problems in Animal Husbandry and Nutrition. 1 to 8 credits. Offered 1, 2, 3.

AL. 610.—Hormones in Reproduction of Farm Animals. 2 hours, and 3 hours laboratory. 3 credits. Offered 2 in alternate years. Not offered in 1957-58.

The Embryology, Anatomy, Histology and Physiology of the Endocrine glands. Chemistry of the hormones and various interrelationships of endocrine glands and target tissue.

AL. 650.—Advanced Methods in Nutrition Technology. 3 hours. 3 credits. Offered 2.

For graduate students but open to seniors by special permission. Demonstrations and Limited performance of Procedures Used in Nutrition Research.

AL. 651.—Advanced Animal Nutrition. 3 hours. 3 credits. Offered 2.

Proteins, Carbohydrates, Lipids, Vitamins, and Enzymes.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

AL. 652.—Advanced Animal Nutrition Laboratory. 4 hours. 2 credits. Offered 2.

Accompanying laboratory course for AL. 651.

AL. 653.—Vitamins. 3 hours. 3 credits. Offered 1 in alternate years. Not offered in 1957-58.

Historical development, Properties, Assays, and Physiological Effects.

AL. 654.—Laboratory in Vitamins. 4 hours. 2 credits. Offered 1 in alternate years. Not offered in 1957-58.

Chemical Determination and Assay Procedures. Accompanying laboratory course for AL. 653.

AL. 655.—Mineral Nutrition and Metabolism. 3 hours. 3 credits. Offered 1 in alternate years. Not offered in 1958-59.

Physiological Effects of Macro- and Micro-elements, Mineral Interrelationships.

AL. 656.—Laboratory in Mineral Nutrition and Metabolism. 4 hours. 2 credits. Offered 1 in alternate years. Not offered in 1958-59.

Accompanying laboratory course for AL. 655.

AL. 660.—Graduate Seminar in Animal Husbandry and Nutrition. 1 hour. 1 credit. Offered 1, 2.

AL. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

AL. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2, 3.

ANTHROPOLOGY

Instructional Staff 1956-57

Maclachlan, J. M., Head; Frederick, W. C.; Goggin, J. M.; Granberry, J.M.

APY. 201.—General Anthropology. 3 hours. 3 credits. Offered 1.

The field of anthropology. Fossil man analyzed. The development of human types. A descriptive study of the physical characteristics and differences of the major racial groups. Archeological evidence of man's cultural development. Cultural sketches of five primitive groups, the Tasmanian, the Haida, the Hopi, the Aztec, and the Dahomey.

APY. 301.—Cultural Anthropology. 3 hours. 3 credits. Offered 2.

A survey of cultural anthropology. The nature of culture, of cultural patterns, processes, cultural change and of cultural factors in individual motivation. The content of cultures: language, subsistence, economic structures, social groupings, government, art, mythology, and religion in primitive societies.

APY. 305.—Ancient Civilizations of Latin America. 3 hours. 3 credits. Prerequisite: APY. 201. Offered 1.

The higher Indian civilizations of Central and South America with special reference to the Maya, Aztecs, and Incas. Attention is given to the influence of these civilizations on the Spanish colonies and modern countries.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

APY. 306.—Primitive Arts and Crafts. 3 hours. 3 credits. Prerequisite: APY. 301. Offered 2.

An introduction to the material culture of primitive peoples. A discussion of basic technological processes and methods, their history and spread. The relation of technology to other aspects of culture.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

APY. 500.—Field Session in Archeology. 6 hours. 6 credits. Prerequisite: 6 hours of anthropology, including APY. 201.

Excavation of archeological sites, recording of data, laboratory handling and analysis of specimens, and study of the theoretical culture principles which underlie field methods and artifact analysis.

APY. 501.—Principles of Archeology. 3 hours. 3 credits. Prerequisite: 6 hours of anthropology, including APY. 201. Offered 1.

The viewpoint and methods of archeology, especially as applied to New World materials. The archeological survey. Methods and techniques of excavation. Systems of chronological analysis. Archeology and modern life.

APY. 502.—North American Archeology. 3 hours. 3 credits. Prerequisites: APY. 201 and APY. 501.

The existing archeological materials relating to prehistoric North American cultures. The origins of the North American Indian. Arts and industries in prehistoric North America. Stone-work, pottery, shell and bone-work, metal-work, fabrics and textiles, with attention to patterns of diffusion and invention.

APY. 503.—Culture and Personality. 3 hours. 3 credits. Prerequisite: 6 hours of anthropology, including APY. 201. Offered 1.

The patterned cultural factors of human behavior. The individual, culture, and society. Social structures and social participation. Personality as viewed anthropologically.

APY. 504.—Social Organization. 3 hours. 3 credits. Prerequisite: 6 hours of anthropology, including APY. 201.

Social groups and structures: status groups related to location, kinship, and dual divisions; functional groups related to age, generation, sex groups, phratries and moieties, property groups. The social institutions as status and functional groups: marriage forms, family systems, kinship usages. Property concepts, forms and complexes. Tribal patterns of government and social control.

APY. 505.—Primitive Economics. 2 hours. 2 credits. Prerequisites: APY. 201 or APY. 301; or ES. 201-202.

A study of the economic life of primitive peoples. Production and subsistence, economic institutions and organization, including property, exchange, distribution, consumption, and capital formation in primitive society. Impact of Western economic culture upon under-developed areas. Cultural perspective on economic theory.

APY. 530.—Individual Work. 3 hours. 3 credits. Prerequisite: 12 hours of anthropology, including APY. 201. Offered 1, 2.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

APY. 538.—The North American Indian. 3 hours. 3 credits. Prerequisites: APY. 201 and APY. 301. Offered 1.

The peopling of North America; early cultures considered, including the Sandia, the Folsom, and the Cochise. Archeological backgrounds of North American ethnology. The culture areas of North America. Unique characteristics, institutions and problems of the peoples. The Indian and the European: the effect of the advancing frontier upon Indian cultures, the present status and prospects of the Indian cultures.

APY. 539.—The South American Indian. 3 hours. 3 credits. Prerequisites: APY. 201 and APY. 301. Offered 2.

The settlement of middle and South America. A study of representative early cultures. The major culture areas of South America. The impact of European invasion. The present status and prospects of the Indian groups.

APY. 560.—Seminar in Anthropological Sources and Research Techniques. 3 hours. 3 credits. Prerequisite: 6 hours of anthropology, including APY. 201.

An introduction to major research sources in the field and a study of basic techniques with emphasis on the preparation of manuscripts.

ARCHITECTURE

Instructional Staff 1956-57

Torraca, P. M., Acting Head; Arnett, W. T., Brown, W. H., Callaway, T. R., Chotas, N. E., Clark, J. L., Crosland, R. E., Fearney, E. M., Graves, R. L., Groeneveld-Meijer, J. W., Hamacher, H. B., Hodges, V. S., Johnson, M. H., Koruturk, S. S., Larrick, T., McClure, E. E., McVoy, J. D., Piercy, J. E., Raymond, W., Reeves, F. B., Rose', H. C., Sebold, H. R., Shepard, W. W., Stewart, W. A., Tillman, W. J., Jr., Wilkes, J. A., Young, C. K. M.

GENERAL COURSES

AE. 101.—The Arts of Design. 3 hours. 3 credits. Offered 1, 2, 3.

A survey of the visual arts: An introduction to the principles of Landscape Architecture, Community Planning, Architecture, Building Construction, Interior Design, and allied arts. Course objectives are to lead the student into an understanding and enjoyment of the visual arts and to enable him to develop a valid basis in the selection of a career in the arts of design.

AE. 102.—Vision and Graphics, I. 9 hours studio a week. 3 credits. Offered 1, 2, 3.

Functions and limitations of vision. The interpretation of spatial relationships. Visual and graphic exercises for development of observation, graphic techniques, imaginative ability, visual design, and aesthetic judgment. Study of the elements of design and principles involved in their use.

AE. 203.—Vision and Graphics, II. 9 hours studio a week. 3 credits. Prerequisite: AE. 101, AE. 102. Offered 1, 2, 3.

Techniques of graphic representation. Projects in Research and Design: Introduction to the organization of space for human activity. The study of the basic influences of climate, natural environment, technology, and culture on the design and construction of shelter.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

AE. 204.—Basic Design. 9 hours studio a week. 3 credits. Prerequisite: AE. 203 or approval of Department Head. Offered 1, 2, 3. Continuation of AE. 203.

Projects in Building Research and Architectural Design. Introduction to the study and application of planning techniques.

AE. 205.—Building Technology. 2 hours lecture-discussion, 4 hours laboratory. 3 credits. The first half of the course AE. 205-206. Corequisite: PS. 201. Offered 1, 2, 3.

The materials and methods of building. The analysis of natural and manufactured building materials; their sources; their physical, structural, and aesthetic properties. The study of elementary framing systems; their methods of assembly and architectural expression. An introduction to mechanical equipment.

AE. 206.—Building Technology. 2 hours lecture-discussion, 4 hours laboratory. 3 credits. The second half of the course AE. 205-206. Offered 1, 2, 3. Prerequisite: AE. 205, MS. 105 or approved alternate.

Mechanics and strength of materials: The study of types of loads exerted on buildings, their transmission through the building frame and the forces and stresses produced in structural framing members. The characteristics of basic types of structural building frames and their integration in design.

AE. 209.—Housing for Families. 3 hours. 3 credits. Offered 2.

Problems involved in securing adequate housing for the family. Consideration of physical, social, economic, and other factors involved.

UPPER DIVISION COURSES

Projects in Architecture Groups 1, 2, 3, 4 and 5 will be offered during the first and second semesters only. Upper Division course work during the summer session will be available to graduating seniors and to students requiring remedial work only. Remedial work in connection with any of the groups listed above may be arranged in the summer session through the medium of the course series, Special Studies in Architecture, AE. 321, 322, 323. It is the desire of the faculty to encourage students to use the summer in gaining practical experience.

AE. 301-302-303-304-305.—Projects in Architecture, Group 1. 3 hours conference, 30 hours studio work. 3 credits each; group total, 15 credits. Prerequisite: Completion of Lower Division program in Architecture or equivalent. This series of courses constitutes the beginning work in the Upper Division. Offered 1, 2.

DESIGN: Architectural design with emphasis on the creation of buildings to meet the requirements of use; research; aesthetic, functional and structural analysis; preliminary studies; models, and design drawings.

DELINEATION: Delineation of architectural subjects. Pencil technique; value, form, and composition; perspective.

HISTORY: A study of the architecture of the various cultures from primitive times through the Roman period along with Islamic and Pre-Columbian architecture.

CONSTRUCTION: Study of materials used in the construction of buildings; selection and use of materials; methods of construction; mechanical equipment.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

STRUCTURES: Structural design as a correlated part of the planning and design of buildings; strength of materials; theories of flexure, shear and deflection; design of wood framing.

AE. 306-307-308-309-310.—Projects in Architecture, Group 2. 3 hours conference, 30 hours studio work. 3 credits each; group total 15 credits. This series of courses is a continuation of the work of the series AE. 301-302-303-304-305. Offered 1, 2.

DESIGN: Design of buildings with more complex practical requirements; continuation of research; aesthetic, functional, and structural analysis; preliminary studies and design drawings. Emphasis on relation in architecture, group planning, and a study of external factors affecting the design of buildings.

DELINEATION: Pen-and-ink and watercolor techniques; color theory; tree studies; and landscape painting.

HISTORY: Continuation of the study of the art of building from the Early Christian through the Baroque period.

CONSTRUCTION: Continuation of the study of materials and methods of construction; development of construction details and drawings.

MECHANICAL EQUIPMENT: Introduction to heating and air-conditioning—requirements and systems. Insulation—materials and measurement.

STRUCTURES: Structural design of steel framing; analysis and design of riveted and welded connections.

AE. 321-322-323.—Special Studies in Architecture. 3 hours conference, 30 hours studio work. 3 credits each unit. Prerequisite: Completion of Lower Division program in Architecture or equivalent and recommendation of Advisor. Offered 1, 2, 3.

Special studies in Architecture adjusted to individual needs of transfer students, special students, or seniors.

AE. 401-402-403-404-405.—Projects in Architecture, Group 3. 3 hours conference, 30 hours studio work. 3 credits each; group total, 15 credits. This series of courses is a continuation of the work of the series AE. 306-307-308-309-310. Offered 1, 2.

DESIGN: Site planning and the design of buildings with complex technical requirements. A further development of the method of study of architectural projects with increasing emphasis on economic and social problems. Individual study and group collaboration.

DELINEATION: Delineation of form in architecture in various media; advanced color study; landscape sketching.

HISTORY: Continuation of the study of the development of architecture from the 18th Century to the present, including the influence of the Orient upon the West.

CONSTRUCTION: Continuation of the study of materials and methods of construction; surveying; mechanical equipment.

STRUCTURES: Elements of graphic statics; design of wood and steel roof trusses; framing tall buildings.

AE. 406-407-408-409-410.—Projects in Architecture, Group 4. 3 hours conference, 30 hours studio work. 3 credits each; group total, 15 credits. This series of courses is a continuation of the work of the series AE. 401-402-403-404-405. Offered 1, 2.

DESIGN: Continuation of site planning studies, introducing planning of building

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The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

groups. The design of a two-story building for which architectural working drawings are developed.

CONSTRUCTION: The development of architectural working drawings for a two-story building in wood framing and masonry, including the mechanical equipment layouts. Portions from this work are used later in Group 5 for work in Estimating and Specification Writing.

MECHANICAL EQUIPMENT: Design of plumbing, heating, ventilating, and electrical installations for buildings.

STRUCTURES: Theory of reinforced concrete design. Design of reinforced concrete slabs, joists, beams, girders, and columns.

AE. 501-502-503-504-505.—Projects in Architecture, Group 5. 3 hours conference, 30 hours studio work. 3 credits each; group total, 15 credits. This series of courses is a continuation of the work of the series AE. 406-407-408-409-410. Offered 1, 2.

DESIGN: The design of a multi-storied reinforced concrete building, selected portions of which are used for applied structural design in reinforced concrete. Design of complex buildings or building groups. Emphasis is placed on the complete integration of the architectural, constructional, structural, and mechanical design of buildings.

PROFESSIONAL RELATIONS: The practice of architecture; professional ethics and client relations; job and office administration; supervision; estimating; specifications; contract documents; building codes and law.

STRUCTURES: Foundations and footings; structural plans, drawings, details and schedules; practical problems in applied design of reinforced concrete.

AE. 506-507-508-509-510.—Thesis in Architecture. 1 hour conference, 35 hours research and studio work. 3 credits each; group total, 15 credits. This series of courses is a continuation of the work of the series AE. 501-502-503-504-505. Offered 1, 2, 3.

The nature of the thesis is determined in terms of individual needs and objectives and is based on a program submitted by the student and approved by the faculty. Emphasis may be placed on design, construction, structures, research, or other specialized study in architecture. The presentation will be determined by the nature of the thesis.

GRADUATE COURSES

AE. 601.—Architectural Design. 3 or 6 credits. The first half of the course AE. 601-602. Prerequisite: Bachelor's degree in Architecture. Offered 1, 2, 3.

Research on a special phase of architectural design, selected by the student with the approval of the faculty.

AE. 602.—Architectural Design. 3 or 6 credits. The second half of the course AE. 601-602. Offered 1, 2, 3.

AE. 603.—Architectural Research. 3 or 6 credits. The first half of the course AE. 603-604. Prerequisite: Bachelor's degree in Architecture. Offered 1, 2, 3.

Detailed investigation of a selected problem for the purpose of providing insight and understanding in some field of fundamental importance in architecture.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

AE. 604.—Architectural Research. 3 or 6 credits. The second half of the course AE. 603-604. Offered 1, 2, 3.

AE. 605.—Structural Design of Buildings. 3 or 6 credits. The first half of the course AE. 605-606. Prerequisite: Bachelor's degree in Architecture or in Building Construction. Offered 1, 2, 3.

Advanced study of a problem in the structural design of buildings, selected by the student with the approval of the faculty.

AE. 606.—Structural Design of Buildings. 3 or 6 credits. The second half of the course AE. 605-606. Offered 1, 2, 3.

AE. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

For students working for the master's degree.

ART

Instructional Staff 1956-57

Adams, Clinton, Head; Alsup, G. W., Borgia, A. P., Covington, H. W., Craven, R. C., Denny, D. W., Ebersole, R. P., Grissom, E. E., Holbrook, H. H., Kacere, J. C., McIntosh, P. R., Neidhardt, C. R., Patton, I. H., Peabody, K. E., Purser, S. R.

GENERAL COURSES

ART 105.—Art Laboratory. 6 hours of lecture-laboratory. 3 credits. Offered 1, 2, 3.

An opportunity for students in the University College and others to work at various art processes such as painting, modeling, sculpture, and the like. Creative expression rather than technical proficiency will be emphasized. Recommended especially for students in the Humanities.

ART 112.—Textiles and Clothing. 1 hour lecture and 2 hours laboratory. 2 credits. Not available for Upper Division Arts and Sciences credit. Offered 1.

Textiles in relation to their characteristics, durability, and use for clothing and home furnishings. Basic principles of clothing construction.

ART 121.—The Visual Arts. 3 hours. 3 credits. Offered 1, 2.

An introductory course in art to give students a broad understanding and appreciation of the various visual arts, their relationship to each other, and the part each plays in our society. Taught through lecture, film, exhibition, outside reading and discussion.

ART 123.—Color and Design. 6 hours of lecture-laboratory. 3 credits. Offered 1, 2, 3.

A study of the elements and principles of design as a means of developing graphic expression a two-dimensional surface.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ART 124.—Drawing and Visual Perception. 6 hours of lecture-laboratory. 3 credits. Offered 1, 2, 3.

Creative drawing with an emphasis on devoping visual perception, physical coordination, awareness of media, and individual creatively.

ART 222.—Materials and Spatial Design. 6 hours of lecture-laboratory. 3 credits. Offered 1, 2, 3.

A study of three-dimensional design through projects in construction, modeling, and carving in various materials such as wood, clay, plaster, paper, wire, plastics, etc.

ART 225.—Scientific Contributions to Art. 6 hours of lecture-laboratory. 3 credits. Offered 1, 2.

Problems and discussions relative to the organization of space on a two-dimensional surface with emphasis on perspective, illumination, and color.

ART 226.—Pictorial Composition. 6 hours of lecture-laboratory. 3 credits. Prerequisite: ART 123. Offered 1, 2, 3.

The use of design principles in expressing ideas. Oil paint is the principal medium.

ART 280.—Introduction to Crafts. 6 hours of lecture-laboratory. 3 credits. No prerequisite. Offered 1, 2, 3.

An introduction to the field of crafts for the non-professional student. The work done will be mainly in ceramics. The student will have experience in building in clay, glazing, and decorating ware. This course will not be counted as credit for crafts majors.

ART 290.—Art Survey. 3 hours. 3 credits. Offered 1, 2, 3.

An introduction to important examples of painting, sculpture, architecture and related arts from 4000 B. C. to contemporary art movements. No previous knowledge of art will be expected of the student. Class discussions, lectures, and slide projections will be employed.

UPPER DIVISION COURSES

ART 301.—Design I. 6 hours of lecture-laboratory. 3 credits. Prerequisite: ART 226. Offered 1, 2, 3.

An investigation of color, line, and design, and their relationship to pictorial composition. Problems will be based upon organization of the picture plane and will be developed through the various phases of watercolor techniques as media for visual expression.

ART 302.—Design II. 6 hours of lecture-laboratory. 3 credits. Prerequisite: ART 301. Offered 1, 2, 3.

A continuation of ART 301, with emphasis on individual experimentation in the various water media.

ART 311.—Freehand Drawing I. 6 hours of lecture-laboratory. 3 credits. Prerequisite ART 124. Offered 1, 2, 3.

Drawing with emphasis on the relationship of the structure of the figure to its movement.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ART 312.—Freehand Drawing II. 6 hours of lecture-laboratory. 3 credits. Prerequisite: ART 311. Offered 1, 2, 3.

A continuation of ART 311.

ART 322.—Sculpture. 6 hours of lecture-laboratory. 3 credits. Prerequisite: ART 222. Offered 1, 2.

Work in three-dimensional materials such as clay, plaster, stone, wood, plastics and metals.

ART 330.—Patternmaking. 2 hours and 2 hours laboratory. 3 credits. Offered 1.

Fundamental principles of flat pattern designing by use of basic foundation patterns in various scale measurements. Emphasis is placed on development of student's ability to adapt the basic foundation pattern in constructing accurate and complete patterns for current fashions.

ART. 333.—Costume Construction. 3 hours and 6 hours laboratory. 6 credits. Offered 1.

A study of basic principles of clothing selection and construction. Various garments are constructed to develop skill in the use of the sewing machine, commercial patterns, pattern alterations, and finishing techniques. Emphasis is placed on style of garment, fabric, color and fitting experience.

ART 334.—Costume Construction II. 3 hours and 6 hours laboratory. 6 credits. Prerequisite: ART 330 and ART 333. Offered 2.

Advanced principles of clothing selection and construction with emphasis on color, texture and original designs. One garment is made from pattern drafted by student; other garments are constructed by adaptation of commercial patterns. Discussion and comparison of practical approaches in construction techniques.

ART 335.—Textiles. 2 hours and 2 hours laboratory. 3 credits. Offered 1.

Survey of fundamentals of fabric construction, yarn, weaves, color, dye, finishes and design. Proper use, care and selection of fabrics for clothing from both artistic and economical viewpoints are discussed.

ART 336.—Fashion Fundamentals. 2 hours and 2 hours laboratory. 3 credits. Offered 2.

Knowledge of fashion fundamentals in planning purchases, care of garments, fabrics, and accessories from artistic, psychological, social and economic viewpoints.

ART 337.—Fashion Sketching I. 6 hours of lecture-laboratory. 3 credits. Prerequisite: ART 311. Offered 2.

Development of the ability of the student in basic fundamental techniques of rendering color and design with emphasis on its relationship to the fashion model.

ART. 338.—Draping. 2 hours and 2 hours laboratory. 3 credits. Offered 2.

Introduction of principles of designing patterns by use of dress form. Emphasis is placed on development of design, line structure, and proportion.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ART 339.—Historic Costume. 2 hours and 2 hours laboratory. 3 credits. Offered 1.

A study of historic origin, authentic colors and art principles in costume as a source of essential inspiration for modern costume and stage designing. Influences of economic, psychological and functional factors as related to design.

ART 341.—Elementary Photography. 6 hours of lecture-laboratory. 3 credits. Prerequisite: C-2. Offered 1, 2, 3.

A course requiring no previous experience with photography. The fundamentals of camera equipment, developing, printing, enlarging, optics, lighting, and the principles of color photography. Special emphasis is given to the elements of design as applied to photography. Training in news photography and operation of the Speed-Graphic camera for Journalism students.

ART 342.—Advanced Photography. 6 hours of lecture-laboratory. 3 credits. Prerequisite: ART 341. Offered 1, 2, 3.

Experimental projects concerned with variations in processing, advanced design, photographic derivations, and development of color film.

ART 351.—Painting I. 6 hours of lecture-laboratory. 3 credits. Offered 1, 2, 3.

Various projects in painting based on the needs of the individual student as ascertained by conferences with the instructor. Emphasis will be placed on acquiring greater technical ability in the use of oil paint.

ART 352.—Painting II. 6 hours of lecture-laboratory. 3 credits. Prerequisite: ART 351. Offered 1, 2, 3.

A continuation of ART 351 with further explorations into painting problems including research into the various painting media available to the artist.

ART 360.—Layouts. 6 hours of lecture-laboratory. 3 credits. Offered 1, 2, 3.

A study of the separate elements of advertisements and an analysis of how these elements can most effectively be used to stimulate the observer. Reproductive processes are examined. Existing advertising designs are criticized and analyzed, then rearranged and redesigned for more effective impact. Materials used in teaching include type proofs, engravers' proofs and photographs.

ART 361.—Lettering. 6 hours of lecture-laboratory. 3 credits. Offered 1, 2, 3.

The purpose of this course is to provide the student with both the fundamental understanding of the uses of lettering and the skills for designing with letters and words. Students work with the broad point lettering pen, brush and mechanical drawing instruments.

ART. 362.—Advertising Design. 6 hours of lecture-laboratory. 3 credits. Prerequisites: ART 360 and ART 361. Offered 1, 2, 3.

Rendering problems are assigned with the purpose of developing in the student an understanding of various commercial art materials and how they are controlled.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ART 365.—Design for Television. 4 hours of lecture-laboratory. 2 credits. Offered 1, 2.

To acquaint the Journalism and Communications student with the fundamentals of good design necessary in their professional work, especially in the field of television.

ART 381.—Crafts I. 6 hours of lecture-laboratory. 3 credits. Prerequisite: ART 122. Offered 1, 2, 3.

An introductory professional course in the crafts field with emphasis on the design of crafts products. The construction, glazing, and firing of ceramic products; the design and weaving of fabrics; the design and execution of objects in silver and copper; and the design and making of leather articles.

ART 382.—Crafts II. 6 hours of lecture-laboratory. 3 credits. Prerequisite: ART 381. Offered 1, 2, 3.

A continuation of ART 381 wih specialization in three crafts areas. Imaginative and creative design with a functional approach will be stressed.

ART 383.—Jewelry and Metalwork I. 6 hours of lecture-laboratory. 3 credits. Prerequisite: ART 222. Offered 1, 2, 3.

An introductory course in metalwork for artists with emphasis on jewelrymaking.

ART 391.—Ancient Art. 3 hours. 3 credits. Offered 1, 2.

A history of art and architecture from the beginning of civilization to the fall of the Roman Empire.

ART 392.—Medieval Art. 3 hours. 3 credits. Offered 1, 2.

A study of architecture, sculpture, painting and the minor arts from 300 A.D. to 1400 A.D.

ART 393.—Art of the Western World. 3 hours. 3 credits. Offered 1.

A study of the correlation of fine arts from ancient to contemporary periods. Special emphasis will be placed upon the effect of the arts upon one another during periods in which the greatest integration took place, and upon the interrelationship of cultural and philosophic evolution to the various art forms.

ART 394.—History of Sculpture. 3 hours. 3 credits. Offered 2.

A concentrated study of the development of sculpture from prehistoric religious examples to contemporary abstract forms. The relationship of materials and technical development to stylistic evolution will be considered along with the function of sculpture in the civilization producing it.

ART 396.—Latin-American Art. 2 hours. 2 credits. Offered 2.

A general survey of the art of Latin America, beginning with the art of the primitive peoples before the arrival of the Europeans, continuing through the colonial period and concluding with a study of contemporary Latin-American Art.

ART 403.—Design III. 6 hours of lecture-laboratory. 3 credits. Prerequisite: ART 302. Offered 1, 2, 3.

Exploration of the design problem with emphasis upon the development of the expressive potential of the individual. Experimentation is encouraged in a variety of media.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ART 404.—Design IV. 6 hours of lecture-laboratory. 3 credits. Prerequisite: ART 403. Offered 1, 2, 3.

Continuation of ART 403. A fuller consideration of select problems is used in the search for personal expression.

ART 413.—Freehand Drawing III. 6 hours of lecture-laboratory. 3 credits. Prerequisite: ART 312, and permission of the faculty. Offered 1, 2, 3.

Further study of the human head and figure with emphasis upon creative interpretation of the gestures, weights, and contours of the figure.

ART 414.—Graphic Arts. 6 hours of lecture-laboratory. 3 credits. Prerequisites: ART 226 and ART 302. Offered 1, 2, 3.

A study of the technical processes of print making in black and white color.

ART 430.—Tailoring. 2 hours and 2 hours laboratory. 3 credits. Prerequisites: ART 433 and ART 438. Offered 2.

Tailoring techniques with practical construction of a wool coat or suit with emphasis on individual selection and fit. Commercial, or drafted pattern may be used.

ART 431.—Design Studio. 3 hours and 6 hours laboratory. 6 credits. Prerequisites: ART 433, ART 438. Corequisite: ART 432. Offered 2.

Garment construction from studio workroom design sketches according to professional practices of custom house.

ART 432.—Studio Sketching. 6 hours of lecture-laboratory. 3 credits. Prerequisite: ART 435. Corequisite ART 431. Offered 2.

Sketching original designs for varied types of wearing apparel for social and economic functions. Sketches of studio workroom designs to be used in conjunction with design studio taken simultaneously.

ART. 433.—Costume Construction III. 3 hours and 6 hours laboratory. 6 credits. Prerequisites: ART 330, ART 334 and ART 338. Offered 2.

A more advanced study of clothing selection and construction. Problems in construction include garments made from patterns drafted and draped by the student. Commercial patterns used for comparison and accuracy of pattern detail, construction, fitting and finishing techniques.

ART 435.—Fashion Sketching II. 6 hours of lecture-laboratory. 3 credits. Prerequisite: ART 337. Offered 1.

Advanced work in fashion sketching with emphasis on commercial aspects of fashion and accessories.

ART 436.—Fashion Sketching III. 6 hours of lecture-laboratory. 3 credits. Prerequisite: ART 435. Offered 2.

A continuation of ART 435 with emphasis on preparation of professional sketches for newspapers, magazines, and other aspects of fashion field.

ART 438.—Advanced Draping. 2 hours and 2 hours laboratory. 3 credits. Prerequisite: ART 338. Offered 1.

Advanced work in draping patterns from fashion sketches and original designs with emphasis on perfecting draping techniques for various types of wearing apparel. Opportunity for work on special problems.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ART 453.—Painting III. 12 hours of lecture-laboratory. 6 credits. Prerequisite: ART 352. Offered 1, 2, 3.

A continuation of ART 352 with emphasis on the creative individuality of the student.

ART 454.—Painting IV. 12 hours of lecture-laboratory. 6 credits. Prerequisite: ART 453. Offered 1, 2, 3.

A continuation of ART 453 with emphasis on the acquisition of more professional attitudes and abilities.

ART 461-462-463.—Projects in Advertising Design, Group 1. 18 hours of lecture-laboratory. 3 credits each; group total, 9 credits. Prerequisites: ART 360, ART 361, and ART 362. Offered 1, 3.

Various problems including page advertisements for industry, direct mail pieces, poster design, package design and educational visual aids. An analysis of the product market, media and reproduction methods.

ART 464-465-466.—Projects in Advertising Design, Group 2. 18 hours of lecture-laboratory. 3 credits each; group total, 9 credits. Prerequisite: ART 463. Offered 2, 3.

A continuation of ART 461, 462, and 463. Problems involving more complex design elements such as institutional advertising directed to specialized audiences, and explanatory drawings of scientific subjects. ART 465 and ART 466 will allow students to explore specialized fields.

ART 481.—Ceramics I. 12 hours of lecture-laboratory. 6 credits. Prerequisite: ART 382. Offered 1, 2, 3.

A further development of ceramics, previously studied in ART 381 and ART 382. Emphasis will be placed on ceramic construction, decorative techniques, and glazing and firing.

ART 482.—Jewelry and Metalwork. 12 hours of lecture-laboratory. 6 credits. Prerequisite: ART 383. Offered 1, 2.

A continuation of ART 383.

ART 483.—Special Problems in Crafts I. 6 hours of lecture-laboratory. 3 credits. Prerequisite: ART 381. Offered 1, 2, 3.

Special problems selected by the student with the approval of the instructor.

ART 484.—Special Problems in Crafts II. 12 hours of lecture-laboratory. 6 credits. Prerequisites: ART 381 and ART 483. Offered 1, 2.

Further study in areas selected by the student in consultation with the instructor.

ART 493.—Art of the Renaissance. 3 hours. 3 credits. Offered 1, 2.

Art and architecture from 1400 to the early part of the nineteenth century.

ART 494.—Modern Art. 3 hours. 3 credits. No prerequisite. Offered 1, 2, 3.

The history of art from 1850 and the development of art leading to movements such as Fauvism, cubism, futurism, expressionism, etc. Emphasis devoted to French and American art.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ART 495.—History of Painting. 3 hours. 3 credits. Offered 1.

A concentrated study of painting from early cave paintings to the most recent contemporary trends. Emphasis will be placed on the growth and interrelation of the philosophic concepts involved in the development of painting through the ages. Full consideration will be given to the reflection of creative expression in the artists' products.

ART 496.—History of Crafts and Craft Techniques. 3 hours. 3 credits. Offered 2.

A study of the development of the major crafts in the history of world art. Design, technical problems and their solutions, function and evolution will be considered. This will be a comprehensive course devoted entirely to the creative crafts produced by the principal civilizations as well as the primitive cultures of the world.

ART 497.—History of Oriental Art. 3 hours. 3 credits. Offered 1.

A study of the arts and crafts of Oriental civilizations from the early to the contemporary periods. The material covered in this course will include the painting, crafts, sculpture and allied arts. Consideration will be given the differences in the development of art in the Eastern and Western World with an evaluation of the reasons for such differences in terms of philosophic and cultural deviations.

ART 498.—Methods and Materials of the Artist. 3 hours. 3 credits. Offered 2.

Study and experiment in the various techniques of painting and sculpture as used by artists through the various major periods of art history. The course is designed to enlarge the student's appreciation for the technical and aesthetic problems of the artist with relation to the media employed in his craft.

ART 503.—Art Problems in Art Education. 6 hours workshop. 3 credits. Corequisites: EDS. 600 or EDS. 604. Offered 1, 2, 3.

A series of projects related to the field of specialization.

GRADUATE COURSES

Prerequisites: A candidate for the Master of Fine Arts degree must show proper aptitude and adequate preparation (ordinarily equivalent to an undergradute major in art).

ART 651-652-653-654.—Art Problems in Painting and Drawing. 6 hours each. 3 credits each. Offered 1, 2, 3.

A student will select a specific problem which he wishes to explore, and under the guidance of the instructor will plan and execute a series of projects related to the field of painting.

ART 655-656-657-658.—Art Research in Painting and Drawing. 6 hours each. 3 credits each. Offered 1, 2, 3.

An opportunity for advanced students in painting to investigate technical processes that can be adapted to problems of a varied nature.

ART 681-682-683-684.—Art Problems in Crafts. 6 hours each. 3 credits each. Offered 1, 2, 3.

A student will select a specific area which he wishes to explore and under the guidance of the instructor will plan and execute a series of projects related to the field of crafts.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ART 685-686-687-688.—Art Research in Crafts. 6 hours each. 3 credits each. Offered 1, 2, 3.

An opportunity for the advanced student to do research in native materials or native art forms that may be used as source materials, or an opportunity to investigate technical processes that can be adapted to problems in the field of crafts.

ART 691-692.—Art of the Twentieth Century. 6 hours each. 3 credits each. Prerequisites: ART 391, ART 392, ART 493, ART 494, or the equivalent. Offered 1, 2, 3.

Individual work with occasional conferences. An analysis of the art movements beginning with Cezanne including Post-Impressionism, the Fauves, Cubism, Expressionism, Futurism, Purism, and other schools, and their relationship to contemporary art expression.

ART 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

For students working for the Masters' Degree.

ASTRONOMY

Instructional Staff 1956-57

Kokomoor, F. W., Head; Awtrey, R. A., Cowan, R. W., Rohde, F. Virginia.

ATY. 141.—Descriptive Astronomy. 3 hours. 3 credits. Not open to students who have had any other course in astronomy. Offered 1, 2, 3.

An elementary survey of the astronomical universe with a minimum of mathematical work. Primarily intended as an elective for those not majoring in a physical science or mathematics.

ATY. 305.—Celestial Navigation. 3 hours. 3 credits. Prerequisite: MS. 105 or its equivalent. Offered 1.

The geographical and astronomical principles and practices involved in determination of position at sea and in the air, and in the guidance of marine vessels and aircraft. Topics studied include charts, the compass, dead reckoning, piloting, nautical astronomy, navigational instruments, the navigator's work at sea.

ATY. 306.—Celestial Navigation. 3 hours. 3 credits. Prerequisite: ATY. 305. The second half of the course ATY. 305-306. Offered 2.

ATY. 316.—General Astronomy. 3 hours. 3 credits. Prerequisite: MS. 105 or its equivalent. Offered 1.

A moderately detailed survey of the solar system. The earth as an astronomical body; the sun; the moon; the planets individually; comets, asteroids, and meteors. Occasional observation periods. Especially recommended for majors in a physical science or mathematics; or those who have had some previous work or experience in astronomy.

ATY. 317.—Advanced General Astronomy. 3 hours. 2 hours laboratory. 4 credits. Prerequisite: ATY. 316. Offered 2.

The stellar system. Distances, masses, luminosities of the stars. Eclipsing and spectroscopic binary stars. Interstellar matter and the galaxies. An introduction to astrophysics.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BACTERIOLOGY

Instructional Staff 1956-57

Tyler, M. E., Head; Carroll, W. R., Hardy, A. V., Herzberg, M., Hinz, C. F., Jefferies, M. B., Panos, C., Pratt, D. B., Schneider, N., Silver, W. S.

BCY. 300.—Bacteria in Everyday Life. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite: C-61 or equivalent. Offered 1, 2, 3.

Bacteria in relation to evolution, higher plants and animals, and particularly man. Their functions in the cycle of chemical transformations, in food production, in disease, and in general sanitation. The related activities of some yeasts and molds, and of the filterable disease agents. A terminal course, not acceptable for admission to advanced courses in bacteriology. Available for minor credit to graduate students in non-science curricula only.

BCY. 305.—Basic Introductory Bacteriology. 3 hours. 3 credits. Prerequisites: 6 hours of biology, 8 hours of chemistry, 3 hours each of mathematics and physics; organic chemistry recommended. Corequisite: BCY. 306 or BCY. 307. Offered 1, 2.

This course is prerequisite to all advanced courses in bacteriology. Fundamental relationships among the biological, physical, and chemical activities of bacteria, including rickettsia and filterable viruses. Detailed consideration of the taxonomy, cytology, and biophysics of bacteria, and an introduction to physiology, pathogenesis, and immunology.

BCY. 306.—Basic Bacteriology Laboratory. 6 hours. 3 credits. Corequisite: BCY. 305. Offered 1, 2.

Laboratory experience in observing and characterizing bacteria and viruses, largely through primary isolation from natural sources. Extended practice in techniques fundamental to adequate study of these microorganisms. This course is required for undergraduate majors in bacteriology.

BCY. 307.—Introductory Bacteriology Laboratory. 3 hours and arranged observation period. 1 credit. Corequisite: BCY. 305. Offered 1, 2.

Study of the morphology, physiology, and cultural characteristics of some typical bacteria and related microorganisms. Introduction to laboratory techniques necessary in the study of bacteria.

BCY. 400.—Bacterial Ecology. 2 hours, and 3 hours laboratory. 3 credits. Prerequisite: 4 hours of introductory bacteriology. Offered 2.

Discussion of the properties and interrelationships of bacteria in the natural environment: air, water, soil, and on plants. Particular attention will be given to soil forms beneficial and harmful to agriculture, to inhabitants of Florida springs and lakes, and to marine bacteria. Laboratory study of selected natural processes involving bacteria.

BCY. 402.—Dairy Microbiology. 2 hours, and 4 hours laboratory. 4 credits. Prerequisite: 4 hours of introductory bacteriology. Offered 2.

Study of the types and biochemical activities of microorganisms involved in preparation and spoilage of milk and its products; consideration of sanitary and public health problems. Laboratory experience in the elementary preparation and study of cultures of dairy microorganisms, in Standard Methods for the Examination of Dairy Products, and in State Board of Health procedures.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BCY. 403.—Food Microbiology. 2 hours, and 4 hours laboratory. 4 credits. Prerequisite: 4 hours of introductory bacteriology. Offered 1.

Study of the types and biochemical activities of microorganisms involved in preparation, preservation, and spoilage of foods, and the sanitary and public health problems. Laboratory experience in study of food microorganisms, including application of pertinent national and state food regulations.

BCY. 406.—Sanitary Microbiology. 2 hours, and 4 hours laboratory. 4 credits. Prerequisite: 4 hours of introductory bacteriology. Offered 2.

Discussion of bacteriological problems in sanitation of water supplies, sewage, swimming pools, restaurants, and air, with emphasis on water and sewage. Laboratory exercises in detection and identification of typical bacterial contaminants, including Standard Methods.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

These courses are available to graduate students for full credit.

BCY. 504.—Microbiology of Viruses and Rickettsiae. 2 hours, and 6 hours laboratory. 4 credits. Prerequisites: BCY. 305 and 306 or equivalent. Offered 2.

The nature and behavior of filterable viruses pathogenic for bacteria, plants and animals, and of the rickettsiae.

BCY. 508.—Pathogenic Microbiology. 2 hours, and 4 hours laboratory. 4 credits. Prerequisites: BCY. 305 and 306 or equivalent. Offered 1.

Discussion of microorganisms causing infections in man and animals; theories and principles of infection. Laboratory studies of characteristics of, and special techniques required for, pathogenic microorganisms.

BCY. 511.—Immunology and Serology. 2 hours, and 4 hours laboratory. 4 credits. Prerequisite: BCY. 508. Offered 2.

Theories and principles of immunity, antigen-antibody reactions, and allergy. Laboratory exercises in serology.

BCY. 513.—Microbial Physiology. 2 hours, and 4 hours laboratory. 4 credits. Prerequisites: BCY. 305 and 306 or equivalent; CY. 302, CY. 415 recommended. Offered 1.

A survey of microbial physiology, including growth, microbial nutrition, energy metabolism, biosynthesis and biological adaptation. The laboratory will consist of selected exercises stressing a quantitative and experimental approach to metabolic phenomena.

BCY. 515.—Higher Bacteria, Yeasts, Molds, and Actinomycetes. 2 hours, and 6 hours laboratory. 4 credits. Prerequisites: BCY. 305 and 306 or equivalent. Offered 1.

Relationships of higher bacteria, actinomycetes, yeasts, and molds. Industrial fermentations. Brief discussion of diseases caused by these microorganisms.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

GRADUATE COURSES

The areas of graduate study, leading to the M.S. or Ph.D. degree in Bacteriology, are limited to those for which adequate guidance and facilities are available. Specialization may be chosen in general or pathogenic bacteriology, or bacterial physiology. Appropriate choice of major and minor subjects, with staff advice, will give sufficient breadth of education to permit engaging in professional work in these areas, as well as in agricultural, dairy or food bacteriology.

Special arrangements may be made for those interested in graduate work in public health microbiology. With the consent of the Department Head and the Director, Bureau of Laboratories, State Board of Health, a student may pursue a portion of his work at Jacksonville under the direction of qualified employees of the Bureau who have been appointed to the Graduate Faculty of the University.

Prerequisites for admission to graduate study, in addition to those of the Graduate School, are: an undergraduate major in bacteriology, or in biology including at least one course in bacteriology; chemistry courses including general, qualitative and quantitative analysis, and organic; one year of physics and of college mathematics.

Before receiving an advanced degree, each student will be required to demonstrate knowledge equivalent to successful completion of acceptable courses in pathogenic bacteriology, immunology, physiology of bacteria, research methods in bacteriology, basic biochemistry, and biometrics. The Ph.D. candidate must, in addition, demonstrate advanced knowledge in biology and chemistry.

BCY. 600.—Public Health Microbiology. Variable credit (1 to 6 credits per semester. May be repeated. Not to exceed total of 18 hours). Prerequisites: permission of Head of Department and Director of Bureau of Laboratories. Offered 1, 2, 3.

The general principles and current techniques in general diagnostic, sanitary and veterinary bacteriology, tuberculosis, mycology, parasitology and serology are taught by individual guidance and instruction. Reading assignments in standard texts, reference volumes, and scientific journals are supplemented by discussion. Fresh specimens provide laboratory material, the student being assigned in rotation to each of the several sections of the Bureau of Laboratories. Senior students may be introduced to problems of laboratory administration, and qualified students may proceed with advanced work in particular fields. The course is offered at the Bureau of Laboratories, State Board of Health, Jacksonville, by staff members who are on the Graduate Faculty of the University.

BCY. 608.—Advanced Pathogenic Microbiology. 2 hours, and 6 hours laboratory. 4 credits. Prerequisites: BCY. 508, 511; BLY. 209. Offered 2.

An advanced study of infectious processes, stressing the interrelations between parasite and host. Detailed discussions of the important ecological aspects of pathogenic bacteria, yeasts, and molds. Laboratory practice in isolation, identification, and general clinical features of infectious agents, stressing work with experimental animals and clinical specimens. Some attention will be given to associated clinical techniques, such as hematology.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BCY. 613.—Advanced Microbial Metabolism. 2 hours, and 6 hours laboratory. 4 credits. Prerequisites: BCY. 513, ACY. 641, 642. Offered 2.

A detailed study of selected topics in microbial physiology, including the metabolism and nutrition of autotrophic bacteria, the temperature relationships of bacteria, biosynthetic mechanisms, and enzyme adaptation. Consideration will be given to the mechanism of enzyme action and the effects of antimetabolites in the growth and metabolism of bacteria. The laboratory exercises will include manometric techniques, paper chromatography, the production and isolation of biochemical mutants of bacteria and the use of inhibition analysis of biosynthetic mechanisms.

BCY. 620.—Taxonomic Microbiology. 1 hour, and 6 hours laboratory. 3 credits. Prerequisites: BCY. 305, 306, 508, 515. Offered 1.

Historical background in nomenclature of viruses, bacteria, yeasts, molds and actinomycetes. Laboratory practice in morphological, physiological, and serological techniques of classification.

BCY. 625.—Bacterial Genetics. 1 hour, and 6 hours laboratory. 3 credits. Prerequisites: 20 hours of bacteriology; a course in general genetics. Offered 1.

Discussion of the application of genetic principles to bacterial variation, and the contributions of bacterial and viral studies to the progress of genetics. Laboratory experience in observation of bacterial mutation and selection.

BCY. 630.—Research Methods in Microbiology. 2 hours. 2 credits. Prerequisites: 20 credits in progressive study of microbiology. Restricted to, and required for graduate majors. Offered 1.

An outline of the processes involved in scientific research including initiating a problem, experimental techniques, analyses and evaluation of data, and reporting, illustrated by bacteriological examples.

BCY. 655.—Seminar. 1 hour. 1 credit (may be repeated). Offered 1, 2.

Required of graduate majors throughout the graduate career. Discussion of research problems, special topics.

BCY. 699.—Research and Master's Thesis. 0 to 6 credits. Three hours per week for each credit.

BCY. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2, 3.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BIOLOGY

Instructional Staff 1956-57

Wallace, H. K., Head; Auffenberg, W. A., Berner, L., Bovee, E. C., Briggs, J. C., Brodkorb, P., Brookbank, J. W., Byers, C. F., Carr, A. F., DeWitt, R. M., Dickinson, J. C., Goin, C. J., Gregg, J. H., Griffith, M., Grobman, A. B., Hunter, G. W., Hussey, R. F., Jones, E. R., Kilby, J. D., Laessle, A. M., Layne, J. N., Leavitt, B. B., Pierce, E. L., Redmond, J. R., Riemer, W. J., Wallbrunn, H. M., Westfall, M. J., Yount, J. L.

Students are not restricted to fixed undergraduate or graduate curricula in Biology. Programs appropriate to the needs of individuals should be arranged in consultation with the Departmental Advisor. Students planning to major in Biology should take C-6 and BLY. 161-162, or their equivalent, during the freshman year and should consult with the Departmental Advisor at their earliest opportunity.

Courses marked (**) are "service courses" offered by the Department of Biology for the special needs of students in the College of Education. These courses do not give credit toward a major or group major in the College of Arts and Sciences.

BLY. 161, 162, or 181 are prerequisites for all the courses in the Department unless otherwise indicated.

BLY. 161.—Biology Laboratory. 4 hours laboratory. 2 credits. Prerequisite or corequisite: C-61. Offered 1, 2.

An introductory laboratory course dealing with cells, mammalian anatomy, the major groups of plants, methods of reproduction and germ cell formation.

BLY. 162.—Biology Laboratory. 4 hours laboratory. 2 credits. Prerequisites or corequisites: C-62 and BLY. 161. Offered 1, 2.

An introductory laboratory course dealing with genetics, homology, embryology, evolution, taxonomy and ecology.

BLY. 181.—General Zoology. 2 hours, and 4 hours laboratory. 4 credits. Offered 1, 2.

An introductory course dealing with protoplasm, animal cells, the structure, functioning, embryology, and evolutionary relationships of representatives of the major animal phyla.

BLY. 202.—Evolution Today. 2 hours. 2 credits. Prerequisite: C-6. Offered 2.

Evolutionary theories and their historical development. Available for students in the social sciences and the humanities.

BLY. 208.—Invertebrate Zoology. 2 hours, and 6 hours laboratory. 4 credits. Offered 2.

Structure, function, and evolutionary relationship of a selected series of animals without backbones.

BLY. 209.—Comparative Vertebrate Anatomy. 2 hours, and 6 hours laboratory. 4 credits. Offered 1, 2.

Lectures on the structure of the various types of chordate animals are accompanied by laboratory work dealing chiefly with amphioxus, shark, necturus, and cat.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BLY. 210.—Vertebrate Embryology. 2 hours, and 6 hours laboratory. 4 credits. Offered 1, 2.

Lectures on the embryology of the various groups of chordate animals are accompanied by laboratory work dealing chiefly with the frog, chick and pig.

****BLY. 300.—Common Animals and Plants of Florida.** 1 hour, and 6 hours laboratory or field work. 3 credits. Prerequisite: C-6.

Designed to provide a recognition of and an acquaintance with some of the more common animals and plants of Florida. Individual work in the field and the making of a personal reference collection of plants and animals is encouraged.

****BLY. 301.—Biological Laboratory Technique for Teachers.** 2 hours, and 3 hours laboratory. 3 credits.

Designed to provide prospective instructors at the high school level with a sound background in biology and information regarding methods of preparation of material and sources of supply for the high school course.

****BLY. 302.—The Life of the Inland Waters of Florida.** 1 hour, and 6 hours laboratory or field work. 3 credits. Prerequisite: C-6.

A companion course to BLY. 300 but concerned with the common plants and animal life of our streams, pools, ponds, lakes and marshes. Particular attention is given to obtaining an acquaintance with those species and groups of organisms that comprise the more important, more conspicuous, and more interesting members of Florida's rich aquatic biota. Laboratory demonstrations, field trips and individual projects will form an important part of this course.

****BLY. 303.—Birds of Florida.** 1 hour, and 6 hours laboratory or field work. 3 credits. Prerequisite: C-6.

Designed to acquaint students with the bird life of Florida. Particular attention is given to the recognition and identification of the local birds.

BLY. 305.—General Ecology. 2 hours, and 3 hours field work. 3 credits. Offered 1.

An introduction to the study of ecological factors and organizations in terrestrial, freshwater and marine environments. Field work is an examination of representative biotic communities of the Gainesville area.

BLY. 322.—Readings in the Biological Sciences. 3 hours. 3 credits. Prerequisite: C-6. Offered 1.

Readings in selected contributions of biology to human thought and welfare, and their application, both in the sciences and to everyday life. Available for the students in the social sciences and the humanities.

BLY. 323.—Natural History of Animals. 2 hours, and 3 hours demonstration or field trip. 3 credits. Prerequisite: C-61. Offered 2.

Designed to promote an interest in and appreciation of the world of living animals through a consideration of the principal aspects of their behavior and natural history. Attention is given to the fundamental activities and behavior of selected groups of invertebrate and vertebrate animals. Modes of locomotion, methods of food getting, social relationships, reproduction, sensory phenomena, environmental orientation, biology of populations, and dynamics of distribution are among the topics considered.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BLY. 325.—Genetics and Speciation. 3 hours, and 3 hours laboratory. 4 credits. Offered 1.

An introduction to the data and methods of genetics with special reference to their bearing on the problems of speciation and organic evolution.

BLY. 430.—Individual Studies in Animal Biology. 3 credits. Prerequisites: At least fourteen hours in approved major courses in biology, and consent of instructor. Offered 1, 2.

Qualified students and the instructor concerned may choose a particular topic or problem for study. May be repeated for full credit.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

BLY. 505.—Protozoology.—2 hours, and 6 hours laboratory and field work. 4 credits. Prerequisite: BLY. 208.

The structure, physiology, ecology and classification of the protozoa.

BLY. 507.—Vertebrate Paleontology. 3 hours, and 3 hours laboratory and field work. 4 credits. Prerequisites: BLY. 209 and GY. 203. Offered 1.

The origin, distribution and methods of fossilization of vertebrates.

BLY. 510.—Experimental Embryology. 2 hours, and 6 hours laboratory. 4 credits. Prerequisites: BLY. 210, BLY. 573. Biochemistry or organic chemistry desirable. Offered 2.

A study of the problems of embryonic development and the experimental approach to their solution. The laboratory is designed to give experience in both surgical and chemical methods of analyzing developmental processes.

BLY. 511.—Ichthyology. 1 hour, and 6 hours laboratory and field work. 3 credits.

An introduction to the biology of fishes. Designed to provide a knowledge of the morphology, taxonomy, life history, geographic distribution and evolution of the fishes with special reference to the fresh water fishes of Florida.

BLY. 512.—Herpetology. 1 hour, and 6 hours laboratory and field work. 3 credits. Offered 2.

An introduction to the biology of the amphibians and reptiles. Designed to provide a knowledge of the morphology, taxonomy, life history, geographic distribution and evolution of the amphibians and reptiles, with special reference to the Florida forms.

BLY. 513.—Mammalogy. 1 hour, and 6 hours laboratory or field work. 3 credits. Offered 1.

An introduction to the biology of mammals, dealing with the morphology, taxonomy and distribution of mammals of the world, with special emphasis on the natural history of those of the southeastern states.

BLY. 514.—Ornithology. 1 hour, and 6 hours laboratory or field work. 3 credits. Offered 2.

An introduction to the biology of birds. Designed to provide some knowledge of the morphology, taxonomy, distribution and adaptions of the birds of the world, with particular emphasis on the local avifauna.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BLY. 516.—Animal Parasitology. 3 hours, and 3 hours laboratory. 4 credits. Offered 2.

An ecological consideration of the animal organisms, especially the Protozoa and worms, which cause disease in man and the higher vertebrates.

BLY. 528.—Limnology. 3 hours, and 3 hours laboratory. 4 credits. Prerequisite: CY. 121-122, or equivalent.

A consideration of ecological, physical, and chemical patterns in inland waters with a study of classic and important literature.

BLY. 531.—Cytology. 2 hours, and 6 hours laboratory. 4 credits.

Lectures and laboratory on the general morphology of the cell, with particular reference to animal cells, and including the use of various laboratory methods and techniques for studying cells.

BLY. 551.—Comparative Histology. 2 hours, and 6 hours laboratory. 4 credits. Prerequisite: BLY. 210. Offered 1.

The structure and origin of vertebrate tissues and the methods by which they are prepared for study.

BLY. 573.—General and Comparative Physiology I. 2 hours, and 6 hours laboratory. 4 credits. Prerequisites: General Chemistry; Organic Chemistry desirable. Offered 1.

The biochemistry and physiology of cells and organisms.

BLY. 574.—General and Comparative Physiology II. 2 hours, and 6 hours laboratory. 4 credits. Prerequisites: General Chemistry; Organic Chemistry desirable. Offered 2.

The physiology of the major organ systems of animals. May be taken without BLY 573.

GRADUATE COURSES

The fields of graduate work offered in Biology are determined by the interests of the staff and facilities available and are outlined under BLY. 630. Research collections of all classes of vertebrates and some groups of invertebrates are maintained jointly by the Department and the Florida State Museum. The emphasis in these collections is on the southeastern states and the Caribbean region.

Each student is required to present, before the departmental faculty and graduate students, a discussion of his thesis or dissertation during the latter part of his candidacy for a graduate degree.

Prerequisite: Approximately thirty hours of approved undergraduate courses in animal biology, including at least a one-semester course in each of the following: Comparative vertebrate morphology, embryology, invertebrate zoology, and genetics. Students not meeting the above requirements will be required to make up any deficiency early in their graduate work.

It is desirable that the student have completed, as an undergraduate, a year's work in Botany, Chemistry, Geology, and Physics. It is advised, further, that the student have completed twelve hours in one of these allied sciences.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

All students earning the Ph.D. in the department of Biology are expected to be able to demonstrate that they have knowledge equivalent to that to be expected if each had taken and passed the following three courses:

(1) A semester course in biological literature and institutions.
(2) A semester course in the history of biology.
(3) A semester course in statistical methods for biologists.

BLY. 605.—History of Biology. 2 hours. 2 credits. Required of all graduate majors in the department. Offered 1.

BLY. 606.—Biological Literature and Institutions. 2 hours. 2 credits. Required of all graduate majors. Offered 2.

A review of the compendia, journals and bibliographic sources in the various fields of biology, and a survey of the workers, collections, and special fields of research of some of the more important laboratories and museums. Methods used in the preparation of scientific papers for publication are also included. Considerable emphasis will be placed on a study of library methods and the most advantageous use of bibliographic sources.

BLY. 609—Zoogeography. 2 hours. 2 credits. Offered 1.

Zoogeographic divisions of the world and their characteristic animals; factors influencing the distribution of animals; the relation of geographic races to speciation and evolution.

BLY. 612.—Marine Ecology. 2 hours, and 6 hours field or laboratory work. 4 credits. Prerequisites: BLY. 208 and CY. 122.

BLY. 622.—Advanced Ornithology. 2 hours, and 3 hours laboratory. 3 credits. Prerequisite: BLY. 514.

The taxonomy, morphology, natural history, and distribution of the living families of birds; representative genera and species.

BLY. 626.—Advanced Animal Ecology. 2 hours, and 6 hours field work. 4 credits. Prerequisite: BLY. 305. Offered 2.

A study of selected animal habitats, their occupants and organization. Classroom work is an evaluation of the community concept and an appraisal of the role of ecology in evolution.

BLY. 630.—Individual Studies in Animal Biology. Hours and credits to be arranged. Prerequisite: Graduate status and consent of the instructor. Offered 1, 2.

Studies may be chosen from one or more aspects of the following fields: comparative anatomy, cytology, ecology, embryology, experimental biology, fresh water biology, game management, genetics, herpetology, histology, icthyology, invertebrate zoology including arachnology and insect biology, limnology, malacology, mammalogy, marine biology, ornithology, parasitology, general or comparative physiology, protozoology, vertebrate paleozoology, and zoogeography. BLY. 630 may be elected for additional credit in subsequent semesters.

BLY. 632.—Advanced Invertebrate Zoology. 2 hours, and 6 hours laboratory or field work. 4 credits. Prerequisite: BLY. 208. Offered 2.

An advanced survey of the morphology, developmental stages and classification of the invertebrate phyla.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BLY. 633.—Problems and Concepts of Taxonomy and Nomenclature. 2 hours. 2 credits.

A critical study of selected taxonomic synopses, revisions, and monographs with special reference to the bearing of the principles and concepts of distribution, genetics and ecology on taxonomic problems.

BLY. 666.—Biometrics. 3 hours. 3 credits. Prerequisites: MS. 310 and 20 hours in Biology. Offered 2.

Application of standard statistical procedures to biological problems.

BLY. 690.—Special Topics in Biology. 3 credits. Offered 1, 2.

Special topics will be studied with small, interested groups of students. The planned topics are: Wildlife Conservation, Fishery Biology, Physiological Genetics, Population Genetics, Taxonomy and Natural History of Arthropods. BLY. 690 may be elected for additional credit repeatedly providing there is a change of topic.

BLY. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2.

BLY. 700.—Teaching Methods in Biology. 3 hours. 3 credits. Offered 1.

A study and analysis of the various methods of selecting, presenting and evaluating material for college courses in Biology. Designed to give practical experience and aid in professional training for those preparing to teach Biology in college.

BLY. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2.

BOTANY

Instructional Staff 1956-57

Ford, E. S., Acting Head; Davis, J. H., Griffith, Mildred, Powell, R. D., West, Erdman.

BTY. 101.—General Botany. 2 hours, and 2 hours laboratory. 3 credits. Offered 1, 2, 3.

The form, structure, growth, reproduction, and physiology of plants and their various organs.

BTY. 102.—General Botany. 2 hours, and 2 hours laboratory. 3 credits. The second half of course BTY. 101-102. Prerequisite: BTY. 101 or equivalent. Offered 1, 2.

Representatives of major groups of plants regarding their classification, life histories and environmental relations.

BTY. 211.—Elementary Plant Physiology. 2 hours, and 4 hours laboratory. 4 credits. Prerequisites: BTY. 101 or BLY. 161 and CY. 109-110, or equivalent. Offered 1, 2.

Absorption, assimilation, transpiration, growth, water relations and other functions of plants.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BTY. 305.—Lower Plants. Taxonomy and Morphology. 1 hour, and 4 hours laboratory. 3 credits. Prerequisite: BTY. 101-102 or equivalent. Offered 1.

Biology of algae, fungi, liverworts, and mosses — emphasizing their classification, life histories, and identification of local forms.

BTY. 306.—Higher Plants. Taxonomy and Morphology. 1 hour, and 4 hours laboratory. 3 credits. Prerequisite: BTY. 101-102 or equivalent. Offered 2.

Biology of ferns and seed plants emphasizing their classification and general morphology and identification of their representatives in our flora.

BTY. 350.—Economic Botany. 3 hours. 3 credits. Prerequisite: BTY. 101-102 or equivalent. Not offered 1957-1958.

The botanical characteristics of most categories of plants of economic importance, stressing their kinship, origin, past and present distribution, and various ways utilized, as timbers, fruits, and other foods, fibers, forage, ornamentals, drugs, etc.

BTY. 401.—Plant Ecology. 2 hours, and 4 hours laboratory and field work. 4 credits. Prerequisite: BTY. 101-102. Desirable prerequisite: BTY. 306. Offered 2.

Kinds and classification of vegetation, particularly those of Florida, and consideration and measurement of climatic, edaphic, physiographic, and biotic factors, and of plant successions.

BTY. 431.—Plant Microtechnique. 1 hour, and 4 hours laboratory. 3 credits. Prerequisite: BTY. 102 or equivalent. Offered 1.

Practice in standard methods of preparing plant materials for study microscopically, emphasizing sectioning, staining and photomicrographing. Discussions and demonstrations of uses of microscopes and their accessories applied to study of cells and tissues.

BTY. 432.—Plant Anatomy. 2 hours, and 4 hours laboratory. 4 credits. Prerequisite: BTY. 101-102 or equivalent. Offered 2.

Origin, structure and functions of principal tissues and organs of plants.

BTY. 470.—Undergraduate Research. 3 hours of independent work for each semester credit hour. 1-3 credits. Prerequisites: 14 semester hours of advanced botany and senior standing, and by permission of advisor. Offered 1, 2.

Practice in application of scientific methods to some approved topic in botany, including laboratory and field research; preparation of bioliography and report upon the topic.

COURSE FOR ADVANCED UNDERGRADUATES AND GRADUATES

BTY. 500.—Plant Geography. 2 hours, and 2 hours laboratory. 3 credits. Prerequisites: BTY. 306 and BTY. 401. Offered 2.

Distribution of the important kinds of flora throughout the world, with particular emphasis on the relations of these to geographical, climatic, soil, and human factors.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

GRADUATE COURSES

Graduate majors in Botany should have a Bachelor's degree and 24 semester hours of undergraduate credit in Botany, including BTY. 211, 305, 306, and 432, or their equivalents. The student should have at least 12 semester hours in one allied science, and an elementary course in two other allied sciences.

Graduate minors in Botany must have at least 6 semester hours of undergraduate credit in Botany above BTY. 101 and 102, or their equivalents.

BTY. 600.—Problems in Botany. 3 hours of independent work for each semester hour credit. 1-4 credits. Prerequisites: 14 hours of advanced botany and approval of head of department and instructor. Offered 1, 2, 3.

Problems in one or more of the fields of botany, taxonomy, physiology, ecology and plant geography, and morphology and anatomy, depending on the requirements of graduate minor of major students in botany.

BTY. 601.—Vegetation of Florida. 2 hours, and 3 hours laboratory. 3 credits. Prerequisite: BTY. 401 or equivalent. Offered 1.

All types of vegetation in Florida in relation to soils, climate, physiographic and geologic conditions. Also the uses of the various types.

BTY. 602.—Ecology of Aquatic Plants. 1 hour, and 6 hours laboratory. 3 credits. Prerequisite: BTY. 401. Desirable prerequisite: BLY. 528. Not offered 1957-1958.

Aquatic plant communities of lakes, ponds, rivers, and marshes.

BTY. 603.—Vegetational Plant Geography of the Americas. 2 hours, and 3 hours laboratory. 3 credits. Prerequisite: BTY. 401 or BTY. 500. Not offered 1957-58.

The major types of vegetation of all regions of the Americas, and some economic conservation aspects of the natural and altered vegetation.

BTY. 607.—Taxonomy of Flowering Plants. 1 hour, and 4 hours laboratory. 3 credits. Prerequisite: BTY. 306. Offered 1.

Characteristics of a large number of plant families; intensive study of the local species regarding their names and distribution.

BTY. 611.—Intermediate Plant Physiology. 3 hours. 3 credits. Prerequisites: BTY. 211, CY. 362 or permission of the instructor. First half of BTY. 611-612. Offered 1.

Topics relating to water relations, ionic balance, mineral nutrition and translocation in plants.

BTY. 612.—Intermediate Plant Physiology. 3 hours. 3 credits. Prerequisites: BTY. 211, CY. 362 or permission of the instructor. Second half of BTY. 611-612. Offered 2.

Topics relating to photosynthesis, respiration, metabolism and growth in plants.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BTY. 613.—Plant Physiology Laboratory. 6 hours. 2 credits. Prerequisite or corequisite: BTY. 611. First half of BTY. 613-614. Offered 1.

Laboratory experiments on subjects covered in BTY. 611. The experiments are designed to introduce the student to research methods .

BTY. 614.—Plant Physiology Laboratory. 6 hours. 2 credits. Prerequisite or corequisite: BTY. 612. Second half of BTY. 613-614. Offered 2.

Laboratory experiments on subjects covered in BTY. 612. The experiments are designed to introduce the student to research methods.

BTY. 635.—Plant Cytology. 2 hours, and 3 hours laboratory. 3 credits. Prerequisites: BTY. 306, senior standing, or by permission of the instructor. Offered 1.

Detailed descriptive study of fundamental structures of plant cells, their functions, reproduction and relations to inheritance. A basic course emphasizing principles but with some consideration of recent research and techniques.

BTY. 655.—Botany Seminar. 1 hour. 1 credit. Offered 1, 2.

The literature of various fields of botany. Required of graduate majors in botany.

BTY. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

BUILDING CONSTRUCTION

Instructional Staff 1956-57

Block, H. H., Acting Head; Bird, R. S., Casey, J. J., Grand, J. L. R., Halperin, D. A., Kelly, D. R., Reynolds, H. I., Stakely, J. O.

BCN. 301-302-303-304.—Projects in Building Construction, Group 1. 24 hours conference-laboratory (including field studies) per week. 3 credits each; group total 12 credits. Prerequisite: Completion of Lower Division program in Building Construction or equivalent. Offered 1, 2.

A study of problems involving materials, methods, estimating, structural design, and a general study of the smaller and simpler types of buildings encountered in contemporary construction practice. Criticisms are given individually. Completed work is submitted in the form of research reports, estimates, working drawings, computations, and work books.

MATERIALS: The study of building materials and units of measurement used in the construction industry.

METHODS: The investigation of various methods of accomplishing required results by the use of various materials and equipment. Preliminary site work; site reconnaissance and surveys, building layout, excavation and grading.

ESTIMATING: Interpretation of drawings. Introduction to quantity surveying.

MECHANICAL EQUIPMENT: Plumbing installations in buildings. Trade practices, Building Code requirements.

STRUCTURAL DESIGN: A continuation of statics and strength of materials. Design of timber beams, columns and connections. Graphic and algebraic analysis of trusses and frames.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BCN. 311-312-313-314.—Projects in Building Construction, Group 2. 24 hours conference-laboratory (including field studies) per week. 3 credits each; group total 12 credits. Prerequisites: Completion of BCN. 301-302-303-304, or equivalent. Offered 1, 2.

The continuation of the work in BCN. Group 1, advancing the student to the study and investigation of larger and more complicated structures.

MATERIALS: The continuation of the study of materials and units of measurement used in the building construction industry. Special attention is given to materials used in the construction of component parts of buildings.

METHODS: The preparation, fabrication, assembly, and correct placing of the above materials is investigated, studied, and planned.

MECHANICAL EQUIPMENT: The investigation and study of requirements for heating and air conditioning equipment in the various types of structures, especially as affected by workmanship and the choice of materials. The comparison, selection, and installation of heating and air conditioning units.

ESTIMATING: Methods are studied for the preparation of quantity surveys, and the assembly and presentation of supporting data. Detailed quantity surveys are prepared.

STRUCTURAL DESIGN: Design of steel and aluminum alloy beams and floor systems, steel columns, purlins, rafters, struts, trusses and plate girders. Graphical and algebraic analysis of structural units and assemblies, plate girders, riveted and welded connections for beams, columns, and other structural steel members.

BCN. 401-402-403-404.—Projects in Building Construction, Group 3. 24 hours conference-laboratory (including field studies) per week. 3 credits each; group total 12 credits. Prerequisite: Completion of BCN. 311-312-313-314, or equivalent. Offered 1, 2.

The continuation of the work in BCN. Groups 1 and 2, with the addition of more complicated problems or materials, members, and details to the structures.

MATERIALS: The study of materials used in the building industry is continued, and expanded to include the details of such additional items as masonry, concrete footings, slabs, columns, forms, shoring, needling, and underpinning.

METHODS: The selection and preparation of materials, choice of equipment and temporary structures, provision for placing, and methods for correctly assembling and placing the required materials are investigated and planned.

MECHANICAL EQUIPMENT: The basic design and installation of electrical wiring and equipment, illumination, and vertical transportation.

ESTIMATING: Various methods are used for preparing estimates of materials and costs for the above structures.

STRUCTURAL DESIGN: Detailed investigations are made of the structural requirements for the various special structures included in the studies. The work will include the planning, designing, and detailing of concrete structures.

BCN. 411-412-413-414.—Projects in Building Construction, Group 4. 24 hours conference-laboratory (including field studies) per week. 3 credits each; group total 12 credits. Prerequisites: Completion of BCN. 401-402-403-404, or equivalent. Offered 1, 2.

The continuation of the work in BCN. Groups 1, 2, and 3 consisting of the more difficult and complex features of contemporary construction practice and procedure.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

SURVEYING: Preliminary site reconnaissance, layouts, and surveys. Establishing lines and grades for project and job layout, excavation, and construction by the use of carpenters' level, steel tape, plumb bob, straight edge, and surveyors' transit and level.

REAL ESTATE: The study of basic principles which concern the builder or developer in the acquisition and development of sites for the structures he will build.

SALESMANSHIP: The development of the ability to present the contractors and builders construction plans and proposals to clients, governing boards, and government bodies for the sale of construction skills and services.

HISTORY: The study of the development of construction methods, equipment, management, and control, and the effect on the construction industry.

MANAGEMENT AND SUPERVISION: Directed investigations are made into the general organizations of, and the procedures used in a contractor's office. Job organization and procedure are studied. Specifications and plans for the construction of complete projects are reviewed and analyzed, and specific provisions determined. The procurement of permits, bonds, and insurance is investigated. Information relative to site inspections and the preparation and submission of bids is studied.

SPECIAL INVESTIGATIONS: Opportunity will be provided, subject to faculty approval, for the selection of work directed toward the individual objective of each student in his field of special interest in the building industry .

GRADUATE COURSES

BCN. 601.—Building Construction. 3 or 6 credits. The first half of the course BCN. 601-602. Prerequisites: Bachelor's degree in Building Construction or Architecture, or equivalent. Offered 1, 2, 3.

Advanced studies in building technology or in specialized areas of the building construction field selected by the student and approved by the faculty.

BCN. 602.—Building Construction. 3 or 6 credits. The second half of the course BCN. 601-602. Offered 1, 2, 3.

BCN. 603.—Building Research. 3 or 6 credits. The first half of the course BCN. 603-604. Prerequisite: Bachelor's degree in Building Construction, Architecture, or equivalent. Offered 1, 2, 3.

Detailed investigation of a selected problem in the building construction field designed to make a significant contribution to present knowledge and practices in that field.

BCN. 604.—Building Research. 3 or 6 credits. The second half of the course BCN. 603-604. Offered 1, 2, 3.

BCN. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

For students working for the master's degree.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BUSINESS EDUCATION

Instructional Staff 1956-57

Moorman, J. H., Head; Babb, E. M., Baugher, J. M., Crews, J. W., Dodson, G. A.

BEN. 81.—Introductory Typewriting. 4 hours laboratory. 2 credits. Offered 1, 2, 3.

Skill in typewriting is developed through practice upon personal and business problems. It is intended that the student will develop the skill necessary to meet his personal needs in typewriting.

BEN. 82.—Intermediate Typewriting. 2 hours laboratory. 1 credit. Prerequisite: Permission of department. Offered 1, 2.

For those who have had a limited amount of typewriting instruction but cannot successfully progress in BEN. 181. Further skill in developing personal and business typing is stressed.

BEN. 91.—Introductory Shorthand. 4 hours. 3 credits. Offered 1, 2, 3.

The theory of Gregg shorthand is completed, using the functional method approach.

BEN. 92.—Intermediate Shorthand. 2 hours laboratory. 1 credit. Prerequisite: Permission of department. Offered 1, 2.

For those who have had a limited amount of shorthand instruction but cannot successfully progress in BEN. 191. Further skill in writing and reading shorthand is developed.

BEN. 181.—Advanced Typewriting. 4 hours laboratory. 2 credits. Prerequisite: BEN. 81, BEN. 82, or permission of department. Offered 1, 2, 3.

More intensive training in typewriting. An emphasis will be placed on increased speed and special forms, including reports and manuscripts.

BEN. 191.—Shorthand Dictation. 4 hours. 3 credits. Prerequisites: BEN. 91, BEN. 92, or permission of department. Offered 1, 2, 3.

Dictation is developed, with emphasis on both speed and accuracy. There is a continued emphasis on shorthand skills.

BEN. 291.—Shorthand Dictation and Transcription. 3 hours lecture, 2 hours laboratory. 3 credits. Prerequisites: BEN. 181 and BEN. 191. or permission of department. Offered 1, 2, 3.

This course is needed for obtaining state certification as a teacher of shorthand. Designed for students who wish to develop an ability to transcribe their shorthand notes accurately and rapidly. Further emphasis is placed on improvement of ability to record dictation in shorthand. A limited amount of office experience is provided.

BEN. 351.—Office Practice Techniques. 2 hours lecture, 3 hours laboratory. 3 credits. Offered 1, 2.

The principles of filing, mailing, and other office practices. Limited office experience. Through practice, the student will become fully acquainted with the more important principles and processes.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BEN. 352.—Office Machine Techniques. 5 hours laboratory. 1 hour lecture. 3 credits. Prerequisite: BEN. 81 or permission of department. Offered 1, 2, 3.

A survey course designed to acquaint students with the capabilities and limitations of selected voice-writing machines, duplicating machines, adding machines and calculating machines. Students develop an initial-employment level of skill in operating each kind of machine, and learn the principles of operation of the machines so that they may operate any of the above machines regardless of the variations in machines.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

BEN. 561.—Principles of Business Education. 3 hours. 3 credits. Open only to business teachers and business teacher trainees. Offered 1.

The principles, purposes, and program of business education are studied in relation to the total secondary school program. Each student will make an intensive study of some area which is of particular interest to him. This course may count as major credit on a master's degree.

BEN. 652.—Teaching Office Machines. (Formerly BEN. 552). 2 hours lecture and 3 hours laboratory. 3 credits. Prerequisite: BEN. 352 or equivalent. Offered 3.

The functions of machines in offices, the type of machine best fitted to carry out the various functions, and the methods of teaching the operation of machines commonly used in business offices. Instruction in the operation of equipment with which the student is not familiar will be given. Each student will submit a paper based upon his reading in the area.

BEN. 662.—Teaching Secretarial Studies. (Formerly BEN. 562). 3 hours. 3 credits. Offered 1.

For teachers of business subjects. The curriculum, materials, and methods of teaching secretarial subjects are studied. Each student will make an intensive study in the subject in which he is particularly interested. Whenever possible the facilities of the P. K. Yonge Laboratory School will be used for the study of problems undertaken.

BEN. 663.—Teaching Bookkeeping and Consumer Business Subjects. (Formerly BEN. 563). 3 hours. 3 credits. Offered 2, 3.

The curriculum, materials, and methods of teaching bookkeeping, economics of business, business law, business arithmetic, economic geography, and business correspondence are studied. Each student will make an intensive study in the area in which he is particularly interested. The P. K. Yonge Laboratory School will be used as a laboratory for the study of the problems undertaken.

BEN. 664.—Materials and Methods of Teaching General Business. (Formerly BEN. 564). 3 hours. 3 credits. Offered 2.

The objectives, content, resource materials, and methods of teaching general business in the junior and senior high schools are studied. Each student will participate in the development of resource units. Consideration will be given to the problem of coordination of general business and social studies.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BEN. 685.—Problems in Business Education. (Formerly BEN. 585). 3 hours. 3 credits. Offered 3.

Areas of interest of students enrolled will be studied intensively. Problems in business education in Florida schools will be emphasized. Each student will prepare a written report of this study.

BEN. 705.—Seminar in Business Education. (Formerly BEN. 605). 3 or 6 hours. 3 or 6 credits. Offered 3.

For advanced graduate students specializing in business education. Intensive study of specific problems of paramount importance in business education.

BEN. 775.—Administration and Supervision of Business Education. (Formerly BEN. 575). 3 hours. 3 credits. Open only to business education teachers with a minimum of two years of teaching experience and approval of the head of the department. Not offered 1957-58.

Problems and duties of administrators and supervisors of business education are studied. Study is made of departmental organization, rendering services to administrative offices and other school departments. Emphasis will be placed on the duties and responsibilities of the department head and the supervisor at the city or county level.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BUSINESS ORGANIZATION AND OPERATION

Instructional Staff 1956-57

Sweeney, V. V., Head; Brohm, H. D., Butterworth, J. D., Cline, R. S., Dietz, J. W., Fox, W. M., Gaitanis, L. A., Goodwin, F., Hipp, J. E., Hodges, H. G., Hovey, S. W., Howard, W. M., McFerrin, J. B., Oliver, C., Jr., Richardson, J. G., Shaw, S. J., Thompson, R. B., Thomson, N. B., Traxler, R. N., Jr., Wyatt, J. W., Yoder, L. C.

Economic Theory
(See other groupings for additional ES. courses.)

*ES. 200
*ES. 201
*ES. 202
*ES. 208
*ES. 210
*ES. 246
*ES. 404
*ES. 407
*ES. 408
*ES. 409
*ES. 410
*ES. 411
*ES. 468
*ES. 485
*ES. 602
*ES. 605
*ES. 606
*ES. 608
*ES. 609
*ES. 610
*ES. 611
*ES. 632
*ES. 637
*ES. 685
*ES. 691
*ES. 692

Banking and Finance

*ES. 321
BS. 322
BS. 324
*ES. 327
BS. 420
*ES. 421
BS. 422
BS. 424
BS. 427
BS. 428
*ES. 429
*ES. 441
*ES. 449
*ES. 477
*ES. 478
BS. 621
*ES. 622
BS. 624
BS. 627
BS. 628
BS. 629
*ES. 677
*ES. 678
*ES. 679

Marketing

BS. 231
BS. 233
BS. 334
BS. 336
*ES. 347
BS. 430
BS. 433
BS. 434
BS. 437
BS. 438
BS. 439
BS. 448
BS. 450
BS. 459
BS. 474
BS. 611
BS. 634
BS. 635
BS. 637

Foreign Trade and Economic Geography

*ES. 296
*ES. 347
*ES. 382
*ES. 441
BS. 448
*ES. 449
*ES. 483
*ES. 643
*ES. 645
****GPY. 481
****GPY. 485
****GPY. 486
****GPY. 586
****GPY. 587
****GPY. 588
****GPY. 589
****GPY. 689

Insurance

BS. 260
BS. 363
BS. 365
BS. 366
BS. 462
BS. 463
BS. 481
BS. 482
BS. 484
BS. 487
BS. 662
BS. 666
BS. 667
BS. 668

Business Law

BS. 401
BS. 402
BS. 403
BS. 484
***RE. 493
BS. 601

Labor

*ES. 372
BS. 373
BS. 472
*ES. 475
*ES. 476
*ES. 672
BS. 673
*ES. 674
BS. 677

Management

BS. 101
BS. 271
BS. 373
BS. 375
BS. 464
BS. 471
BS. 473
BS. 474
BS. 475
BS. 479
BS. 675
BS. 676
BS. 677

Business Statistics

*ES. 203
*ES. 366
*ES. 369
BS. 464
*ES. 469
*ES. 669
*ES. 670
*ES. 671

Transportation and Public Utilities

*ES. 351
BS. 444
BS. 451
BS. 452
*ES. 453
*ES. 454
BS. 457
*ES. 458
*ES. 483
*ES. 650
*ES. 651
*ES. 656

See also Accounting** and Real Estate***

*Course descriptions are given under Economics.
**Course descriptions are given under Accounting.
***Course descriptions are given under Real Estate.
****Course descriptions are given under Geography.

Courses numbered 300 or higher are open only to students with junior standing. Note, however, the specific prerequisites for certain courses.

BS. 101.—Introduction to Business. 3 hours. 3 credits. Offered 1, 2. (Not open to students who have had ES. 201, ES. 202 or BS. 271).

The nature of the private enterprise system and its relation to the economic organization as a whole—the tools and terminology used in recording, appraising, organizing and controlling business operations. The three major functions of business —finance, production and marketing—are surveyed. Attention is given to significant government-business relationships. May not be taken for upper division credit by students in College of Business Administration.

BS. 204.—Business Ethics. 3 hours. 3 credits. Offered 1, 2.

Ethical standards and theories of right and justice underlying business relations. Stress is laid on problems involving social morality, the profit motive, price policies and unfair competition. Specific codes of ethics are analyzed in order to determine the place of business ethics in American contemporary society.

BS. 231.—Principles of Marketing. 3 hours. 3 credits. Prerequisite: ES. 201. Offered 1, 2, 3.

The institutions and methods developed for carrying on trade operations; retail and wholesale agencies; elements of marketing efficiency; the cost of marketing; price maintenance; unfair competition; the relation of the government to marketing.

BS. 233.—Salesmanship. 3 hours. 3 credits. Offered 1, 2, 3.

An introduction to selling. Analysis of types, stages and problems of psychology of sale situations.

BS. 260.—Fundamentals of Insurance. 3 hours. 3 credits. Offered 1, 2, 3.

The basic fundamentals underlying the business of insurance as a prerequisite for more advanced and detailed work in the subject, designed to serve two distinct needs: (1) to give students of economics and commerce a general knowledge of the subject; and (2) to lay a foundation for the future work of those interested in entering the business.

BS. 271.—Principles of Management. 3 hours. 3 credits. Offered 1, 2, 3.

The basic fundamentals of management underlying the solution of problems of organization and operation of business enterprises. Application of these fundamentals to specific fields of industrial management such as production, material, personnel, purchasing, etc.

BS. 322.—Financial Institutions. 3 hours. 3 credits. Offered 1.

A study of the functions of financial institutions; an analysis of the role of savings and investment institutions, insurance companies, trustees, government credit agencies, small loan and consumer finance companies, etc., in the economic process; and an examination of the relationship between such institutions and money, commercial banking, and monetary management.

BS. 324.—Investments for Individuals. 3 hours. 3 credits. Offered 1.

An investment course designed for the non-Business Administration student. It presupposes the student has little or no facility in accounting techniques, mathematics of finance, or corporation finance. This course introduces the student to the principal problems the individual investor faces in attempting to build and conserve a fund and secure an adequate yield. Cannot be used for credit for BSBA degree.

BS. 334.—Sales Management. 3 hours. 3 credits. Prerequisite: BS. 231. Offered 1, 2, 3.

The selection and training of salesmen.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BS. 336.—Credits and Collections. 3 hours. 3 credits. Offered 1, 2.

Retail and mercantile credit; the principles that guide a creditor both in the acceptance of risk and the collections that must follow; credit department operation.

BS. 363.—Life Insurance: Elements. 3 hours. 3 credits. Offered 1, 3.

All types of policies issued by commercial carriers, with emphasis upon individual, family, and business needs; historical background and development; premium and reserve computations; types, organization, and operation of carriers; legal aspects of life insurance; regulation and control. Designed as basic course for students who may become either sellers or buyers of life insurance.

BS. 365.—Fire Insurance. 3 hours. 3 credits. Offered 1, 3.

The principles and practices of the coverage of losses due to fire; the fire insurance contract; insurable interest; endorsements; settlement and adjustment of losses; co-insurance; non-concurrence; rates; reserve, consequential losses; reinsurance.

BS. 366.—Casualty Insurance. 3 hours. 3 credits. Prerequisite: BS. 260. Offered 1, 3.

The principles and personal and business uses of casualty insurance. An analysis is made of workmen's compensation, liability, automobile, aviation, accident and health, theft, boiler and machinery, plate glass, and credit insurance.

BS. 373.—Personnel Management. 3 hours. 3 credits. Offered 1, 2, 3.

A comparison of and critical evaluation of public and private personnel practices and techniques of recruiting, selecting, transferring, promoting, classifying and training workers. Attention is centered on the problem of training to fit workers for the different types and levels of duties called for by the government, by industry and by other types of business enterprises. Consideration of organization, policies, and procedures of managing men.

BS. 374.—Office Management. 3 hours. 3 credits. Offered 2.

The fundamentals of office organization, layout, record keeping, clerical operations, management of office personnel, and control of output.

BS. 375.—Food Planning and Management. 3 hours, and 1 hour lab. 3 credits. (Open only to majors in Resort and Club Management). Offered 1.

A study of the fundamentals in food purchasing, preparation, handling and serving. The lab work will be done in the University Food Service Division.

BS. 401.—Business Law. 3 hours. 3 credits. Offered 1, 2, 3.

Contracts: Nature; kinds; agreement; genuineness of assent; consideration; legality; capacity; third parties; discharge; remedies. Agency: Nature; creation; principal and agent; rights and liabilities of third parties; termination. Negotiable Instruments: Nature; kinds; parties; transfer; holders; defenses; discharge.

BS. 402.—Business Law. 3 hours. 3 credits. Prerequisite: BS. 401. Offered 1,2, 3.

Personal Property: Nature; classification; acquisition of title. Bailments: Nature; classification; termination; pledges and pawns. Carriers: Nature; classification; duties; liabilities. Sales: Nature; formality; transfer of title; warranties; liabilities; rights; remedies; conditional sales. Corporations: Nature; creation; classification; powers; stock; management; rights; liabilities. Partnership: Nature; creation; duties; rights; remedies; liabilities.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BS. 403.—Business Law. 3 hours. 3 credits. Offered 2.

Bankruptcy; real property; mortgages (chattel and real); insurance; suretyship; torts; trusts. C.P.A. Law Review.

BS. 420.—Management of Bank Funds. 3 hours. 3 credits. Prerequisite: ES. 321. Offered 1.

Policies, practices and problems of commercial bank management; loans and discounts, investments, fiduciary and other services, the money market, and relationships and competition with the government and other financial institutions.

BS. 422.—Investments. 3 hours. 3 credits. Prerequisite: BS. 427. Offered 1, 2, 3.

The nature of investments; investment policies and types of securities; analysis of securities; the mechanics and mathematics of security purchases; factors influencing general movements of security prices.

BS. 424.—Investment Analysis. 3 hours. 3 credits. Prerequisite: BS. 422. Offered 2.

The standards employed in the analysis of public utility, railroad, and general corporate securities; the supervision of individual, bank, and insurance company security investments; present day factors influencing security values.

BS. 427.—Corporation Finance. 3 hours. 3 credits. Offered 1, 2, 3.

The economic and legal forms of business enterprise; the instruments of business finance; financial problems as they relate to the ordinary operations of the business involving fixed and working capital, income, dividend policy, and current borrowing.

BS. 428.—Corporation Finance. 3 hours. 3 credits. Prerequisite: BS. 427. Offered 2. A continuation of BS. 427.

The sale of corporation securities; problems incident to growth and expansion; business failures and financial reconstruction; social aspects of corporate financial policy.

BS. 430.—Wholesaling. 3 hours. 3 credits. Prerequisite: BS. 231. Offered 1.

Nature of wholesaling, modern wholesaling systems, organization and management of wholesale businesses, economic aspects and trends in wholesaling.

BS. 433.—Advertising. 3 hours. 3 credits. Offered 1, 2, 3.

A comprehensive guide to the planning and preparation of modern advertising in all of its phases.

BS. 434.—Advertising Problems. 3 hours. 3 credits. Offered 2.

An analysis of current advertising practices, problems, and procedures.

BS. 437.—Retailing. 3 hours. 3 credits. Prerequisite: BS. 231. Offered 1, 2, 3.

The fundamentals of retailing: problems, policies, trends and procedures in retail distribution.

BS. 438.—Sales and Market Analysis. 3 hours. 3 credits. Prerequisite: BS. 231. Offered 1, 2, 3.

The application of scientific methods to the solving of marketing and distribution problems; survey, observational, and experimental methods of gathering data; specific investigations into sales, advertising, brand, price, and trade channel problem solving.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BS. 439.—Principles and Problems of Merchandising. 3 hours. 3 credits. Prerequisite: BS. 437. Offered 1, 2.

Methods and policies relative to business management functions of merchandising; buying, product analysis, pricing, brands, channels of distribution, and sales administration.

BS. 444.—Ocean Transportation. 3 hours. 3 credits. Offered 1.

Problems in ocean transportation; types of ocean carriers; ocean routes; ocean ports; services of ocean freight carriers; ship brokerage and freight brokerage; passenger carriers; steamship combinations and conferences; ocean freight ratemaking; vessel and cargo documents; regulation of shipping; government aid to ship-building and operation; shipping of Florida ports.

BS. 448.—Foreign Trade Technique. 3 hours. 3 credits. (Not offered 1957-58.)

Principles and practices of exporting and importing; export and import organization; market analysis, handling shipments, packing, customs regulations, insurance, financing, promotion, documents used in exporting and importing.

BS. 450.—Retail Management. 3 hours. 3 credits. Prerequisite: BS. 437. Offered 2.

A case course designed to train students in the analysis and solution of retail merchandising and operating problems. Areas covered include store location and layout, buying, pricing, promotion, personnel, inventory control and accounting, and other operating problems.

BS. 451.—Traffic Management: Rates and Ratemaking. 3 hours. 3 credits. Prerequisite: ES. 351. Offered 1.

Classification, tariffs, rate structures, rate-making procedures, and rate regulation of all types of carriers.

BS. 452.—Traffic Management: Service and Service Regulation. 3 hours. 3 credits. Prerequisite: ES. 351. Offered 2.

The duty of service; shipping papers; common carrier liability; claims and reparations; car service; terminal services; diversion, reconsignment and transit privileges; routing certificates and permits for operation.

BS. 457.—Air Transportation. 3 hours. 3 credits. Offered 2.

Significance, development, economic and safety regulation, legal characteristics, international regulations, services and rates, and administration of organized air transport.

BS. 459.—Field Work in Marketing. Variable Credit. Offered 3.

Up to three credit hours for weekly reports and a final report on problems as they arise in a full time three months period of work in Sales, Retailing, Advertising, Wholesaling, Credits and Collections, Market Research, or other work in Marketing under supervision of an approved employer. Open only to students majoring in Marketing, Sales, Retailing, or Advertising curricula only before the last term on the campus, only after completion of a course in the principles of the subject to be practiced, and only with written permission from a sponsoring professor. Complete course regulations may be secured from sponsoring professor. All registrations in this course are subject to these regulations.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BS. 462.—Life Insurance: Problems and Practices. 3 hours. 3 credits. Prerequisite: BS. 363. Offered 2.

A case study course covering life insurance problems and practices in relation to needs, uses, types of contracts, policy provisions, settlement options, the beneficiary, programming, rate and reserve calculations, surrender values, surplus and dividends, underwriting principles, group insurance and retirement plans, industrial insurance, types of insurance carriers and associations, company organizations, government supervision and regulation.

BS. 463.—Social Insurance. 3 hours. 3 credits. Offered 2.

An analysis of the meaning and nature of economic security; the distinctions between social and private insurance; the basic hazards of unemployment, old-age, premature death of breadwinner, sickness and disability, especially as they apply to low income groups; an evaluation of methods for eliminating, reducing or indemnifying these hazards; the development of Social Insurance in the United States, the existing programs including operations, with special emphasis on Title II (Old Age & Survivors Insurance) of the Social Security Act and Florida's Unemployment Compensation and Workmen's Compensation programs.

BS. 464.—Statistical Controls for Management. 3 hours. 3 credits. Offered 2.

The methods and devices used by management in the collection, interpretation and application of data for the control and correction of managerial problems.

BS. 471.—Principles of Organization. 3 hours. 3 credits. Offered 2.

Includes coordinative, scalar, functional and staff phases of government, military, church, and finally industry whose internal and external problems are considered in their application to leadership.

BS. 472.—Collective Bargaining. 3 hours. 3 credits. Offered 2.

A study of the practice and techniques of collective bargaining with respect to the relationship of the individual worker and his union, of the union and the employer, and of the union and the general public.

BS. 473.—Problems in Personnel Management. 3 hours. 3 credits. Prerequisite: BS. 373. Offered 1.

A study of the human relations problems encountered in managing employees emphasizing a philosophy and knowledge of personnel techniques used in solving these problems.

BS. 474.—Purchasing. 3 hours. 3 credits. Offered 1.

Considers organization, principles, forms, procedures and policies in their relation to materials, quantity, sources, time and price; also covers specifications, inspection, stores and records.

BS. 475.—Resort and Club Management. 3 hours. 3 credits. (Open only to majors in Resort and Club Management.) Offered 2.

A study of the organization, management, and operation of private clubs covering all phases of managerial administration.

BS. 479.—Business Policies. 3 hours. 3 credits. Offered 1, 2.

A study of business policies correlating the functions of sales, procurement, personnel, finance and covering various industries and cyclical movements. Open only to seniors and graduate students.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BS. 481.—Ocean and Inland Marine Insurance. 3 hours. 3 credits. Offered 2.

Insurance against perils of transportation by sea and by land, including the use of floater policies.

BS. 482.—Corporate Suretyship. 3 hours. 3 credits. Offered 2.

A general treatment of the background, purpose and functions of corporate suretyship, its uses, the markets it is intended to serve, and how it serves them. Major classes of bonds are examined.

BS. 484.—Legal Aspects of Insurance. 3 hours. 3 credits. Offered 1.

The essentials of the law peculiarly applicable to the business of insurance including Florida's statutory regulation thereof.

BS. 486.—Life Insurance in Relation to Trusts and Estates. 3 hours. 3 credits. Prerequisite: BS. 363. Offered 2.

Estate planning; the coordination of life insurance with other assets; living and testamentary trusts; personal and business life insurance trusts; wills; guardianships; and tax aspects of estate planning.

BS. 487.—Agency Management. 3 hours. 3 credits. Offered 1.

The means, methods, organization and management of operating an insurance agency.

GRADUATE COURSES

Though no graduate major may be completed without adequate course work on the 600 or higher level, certain undergraduate courses in business organization and operation are available for graduate credit as a part of a candidate's major. These are: BS. 403—Business Law; BS. 420—Management of Bank Funds; BS. 422—Investments; BS. 424—Investment Analysis; BS. 428—Corporation Finance; BS. 430—Wholesaling; BS. 434—Advertising Problems; BS. 437—Retailing; BS. 438—Sales and Market Analysis; BS. 439—Principles and Problems of Merchandising; BS. 444—Ocean Transportation; BS. 448—Foreign Trade Technique; BS. 450—Retail Management; BS. 451—Traffic Management; Rates and Rate-making; BS. 452—Traffic Management; Service and Service Regulation; BS. 457—Air Transportation; BS. 462—Life Insurance: Problems and Practices; BS. 463—Social Insurance; BS. 464—Statistical Controls for Management; BS. 471—Principles of Industrial Organization; BS. 472—Collective Bargaining; BS. 473—Problems in Personnel Management; BS. 474—Purchasing; BS. 479—Business Policies; BS. 481—Ocean and Inland Marine Insurance; BS. 482—Corporate Suretyship; BS. 484—Legal Aspects of Insurance; BS. 486—Life Insurance in Relation to Trusts and Estates; and BS. 487—Agency Management.

BS. 601.—Business Liabilities. 3 hours. 3 credits. Offered 1.

Introduction to legal bibliography. Negligence, including liability to business invitee; assault and battery; false imprisonment; malicious prosecution; deceit; defamation; nuisances; trespass; conversion; right of privacy; slander of title; disparagement of goods.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BS. 611.—Mercantile and Consumer Credit Management. 3 hours. 3 credits. Prerequisites: ES. 321, BS. 336, BS. 427. Offered 1.

An advanced course dealing with the principles, practices, problems, legal, social and economic responsibilities of credit administration. Emphasis is placed on policy formation and analyses and interpretation of facts by the case method of approach.

BS. 621.—Problems in Commercial Banking. 3 hours. 3 credits. Prerequisite: BS. 420. Offered 2.

Recurring and special problems confronting the individual bank and commercial banks as a whole.

BS. 624.—Investment Banking. 3 hours. 3 credits. Offered 2.

Investment banking from the practical viewpoint, in order to prepare the student for entry into the business. Equivalent to a training course, covering in considerable detail all the related fundamentals of investment banking generally.

BS. 627.—Problems in Corporation Finance. 3 hours. 3 credits. Prerequisites: BS. 427 and 428 or equivalent. Offered 1.

Some of the leading problems of corporate finance, including valuation, long-term financing, economic aspects of corporate financing, financial problems of the small business, reorganization, and social problems arising from corporate financial practices. Consideration is also given to the relation between this subject and other closely related fields and to the bibliography of the field.

BS. 628.—Central Banking, Policies and Problems. 3 hours. 3 credits. Prerequisite: ES. 321. Offered 2.

The functions, powers, and policies of central banks, the changing role of central banks in the economy, with special emphasis on the place of central banks in a "free" economy and in a "state" economy.

BS. 629.—International Finance: Monetary Systems. 3 hours. 3 credits. Prerequisite: ES. 321. Offered 2.

International monetary systems with special emphasis on the role of central banks. Attention is concentrated on the inter-war period, the factors leading to the breakdown of international financial systems and attempts at reconstruction culminating in the World Bank and the International Monetary Fund.

BS. 634.—Problems of Sales Management. 3 hours. 3 credits. Offered 2.

Analysis of the field, the processes, the problems and the policies of sales management.

BS. 635.—Advanced Marketing Principles. 3 hours. 3 credits. Offered 1, 3.

An advanced analysis of principles, theories and problems in marketing. Consideration is given to the functional, institutional, cost, and historical approaches from both the social and firm points of view.

BS. 637.—Problems in Retail Store Management. 3 hours. 3 credits. Prerequisite: BS. 437. Offered 2.

Some problems in retail store management will be considered embracing policies, methods, and facilities having to do with organization structure, store location, store layout, merchandising, cutomer services, merchandise handling, expense productivity and control, executive and other personnel incentives, reports and ratios useful to management, and subjects of current interest to proprietors and managers.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BS. 662.—The Institution of Life Insurance. 3 hours. 3 credits. Prerequisite: BS. 462 or equivalent. Offered 1.

Investigation of selected problems in life insurance and related fields.

BS. 666.—Advanced Casualty Insurance. 3 hours. 3 credits. Prerequisite: BS. 366 or equivalent. Offered 2.

An advanced course designed to analyze the meaning, economic influences, social values, principles and practices of casualty insurance. The approach is in terms of insurance managerial problems. Emphasis is on the insurance market, policy covers, underwriting, rate-making, loss adjustment, loss prevention effort, reinsurance, insurance finance, types of insurers, and internal and government regulation in relation to the principal casualty insurance lines.

BS. 667.—Problems in Fidelity and Surety Bonding. 3 hours. 3 credits. Prerequisite: BS. 482 or equivalent. (Not offered 1957-1958.)

Advanced study of bonding forms and methods from a practical point of view.

BS. 668.—Business Risk Analysis. 3 hours. 3 credits. Prerequisites: BS. 365, BS. 366, BS. 487, or equivalent. Offered 2.

Clinical examination into the insurable hazards of all types of business concerns with special consideration of insurance protection available.

BS. 673.—Problems in Collective Bargaining. 3 hours. 3 credits. Offered 2.

An examination of the history, present status, and trends of collective bargaining with an analysis of its economic, social, and legal aspects.

BS. 675.—Management Problems. 3 hours. 3 credits. Offered 1.

Deals with specific current industrial problems in the fields of administration, production, finance, personnel, labor relations, purchasing and distribution. Problems are selected from technical magazines in the management fields, and from contacts with key operating personnel in industry.

BS. 676.—Managerial Controls. 3 hours. 3 credits. Offered 2, 3.

Concerns methods and procedures for regulating and checking management activities, in order to channel their operations within the requirements of predetermined plans. Covers controls as the guiding factors of industry as applied to both administrative and operative functions.

BS. 677.—Personnel Techniques and Administration. 3 hours. 3 credits. Prerequisite: BS. 473 or permission of the instructor. Offered 2.

This course emphasizes the study of realistic cases which point up the organizational, human relations, and administrative problems of the personnel administrator. Through the case method approach, the student will be encouraged to develop skill in effectively applying the principles and techniques of personnel management to concrete situations. Each student will be responsible for planning, organizing, and executing a specific personnel project during the semester.

BS. 699.—Research and Master's Thesis. Variable registration. 0 to 6 credits. Offered 1, 2, 3.

Directed research and writing for the M.B.A. degree, taken toward the end of the student's graduate program for credit in addition to the 24 hours required for the master's degree.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

BS. 799.—Research and Doctoral Dissertation. Variable registration. 1 to 12 credits. Offered 1, 2, 3.

Directed research and writing for the Ph.D. degree, taken toward the end of the student's graduate program for credit in addition to the hours of regular courses required by the candidate's supervisory committee for the Doctor's degree. The Doctor's degree in the College of Business Administration requires a major study in economics. However, with approval of the student's supervisory committee the subject of the dissertation may be in the field of business organization and operation.

CANCER RESEARCH

Instructional Staff 1955-56

Ray, F. E., Head; Argus, M. F., Dahlgard, M. G., Higgins, M., Schaeffer, K.

GRADUATE COURSES

See "Special Programs" for the course of study leading to the M.S., and Ph.D. degrees.

CR. 660.—Dyes and Stains in Medical Research. 3 hours. 3 credits. Prerequisites: 10 hours of organic chemistry or 8 hours of organic and 3 of biochemistry.

Relationships of histology, chemistry, and the therapeutic use of dyes and stains.

CR. 661.—Chemical Carcinogenesis. 3 hours. 3 credits. Prerequisites: 10 hours of organic chemistry and a course in biology or biochemistry.

A study of the physiological properties, methods of synthesis and stereochemistry of the compounds (and related substances) that cause cancer.

CR. 662.—Biochemistry of Cancer. 3 hours. 3 credits. Prerequisite: a course in biochemistry.

Includes such topics as genetics, nutrition, endocrinology, viruses, metabolism, diagnosis and therapeutics in relation to the cancer problem.

CR. 665.—Cancer Research Seminar. 1 to 3 hours. 1 to 3 credits. Offered 1.

Discussion of the work of the Cancer Research Laboratory. Papers on current literature. Presentation of theses.

CR. 666.—Cancer Research Seminar. 1 to 3 hours. 1 to 3 credits. Offered 2, 3. Second half of 665.

CR. 676.—Selected Topics in the Biology and Physiology of Cancer. 3 hours. 3 credits. Prerequisites: courses in physiology, comparative anatomy or embryology, and CR. 662 taken previously or concurrently.

Special emphasis will be laid on the physiological aspects of skin, gastric and mammary gland tumorigenesis.

CR. 770.—Oncology. 2 hours, and 3 hours laboratory. 3 credits. Prerequisite: A course in Histology. Offered 1.

CR. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

CR. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2, 3.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

CHEMICAL ENGINEERING

Instructional Staff 1956-57

Beisler, W. H., Head; Bennett, R. B., Brown, W. F., Huckaba, C. E., May, F. P., Nolan, W. J., Payne, H. F., Reed, T. M., Schweyer, H. E., Teller, A. J., Tyner, M., Walker, R. D.

CG. 347.—Industrial Stoichiometry. 3 hours and 3 hours laboratory or equivalent. 4 credits. Prerequisite: CY. 331. Corequisites: MS. 354 and PS. 206. Offered 1, 2, 3.

The application of stoichiometric fundamentals to the solution of industrial process problems by use of the natural laws of conservation of mass and energy. The student is required to develop facility in solving problems in humidity, solubility, thermophysics, thermochemistry and material and energy balances. Hougen & Watson, *Chemical Process Principles — Part I, 2nd ed., Chemical Engineering Problems*—1946. Perry, *Chemical Engineers' Handbook.*

CG. 348.—Industrial Stoichiometry and Fuels. 3 hours and 3 hours laboratory or equivalent. 4 credits. The second half of the course CG. 347-348. Offered 1, 2.

CG. 355.—Principles of Chemical Engineering I. 2 hours. 2 credits. Prerequisites: CG. 347, ML. 355, EM. 365, or permission of instructor. Offered 1, 2.

Fundamental Chemical Engineering operations:— Screening, crushing, grinding, conveying of solids, classification and sedimentation, flotation, filtration, centrifugation and fluidization. Brown, *Unit Operations; Chemical Engineering Problems*—1956; Perry, *Chemical Engineers' Handbook.*

CG. 356.—Principles of Chemical Engineering II. 3 hours. 3 credits. Prerequisite: CG. 355. The second part of course CG. 355-356, 457. Offered 2, 3.

Fundamental Chemical Engineering operations:—Flow of fluids, heat transfer, evaporation, humidity and air-conditioning, and drying.

CG. 361.—Materials of Engineering. 3 hours. 3 credits. Prerequisite: CY. 218. Offered 1, 2, 3.

The fundamental nature of metals and alloys and their equilibrium diagrams. The manufacture of ferrous and non-ferrous metals and alloys. Elementary heat treatment processes. Physical properties of engineering materials, including metals, cements, concrete, clay products, wood and plastics. The elements of corrosion. White, *Engineering Materials.*

CG. 364.—Chemical Engineering Thermodynamics I. 3 hours. 3 credits. Prerequisite: MS. 354. Corequisites: CY. 402, CG. 356. Offered 2, 3.

Thermodynamic concepts, equations of state, the first two laws of thermodynamics and methods for approximating thermodynamic properties. Hougen & Watson, *Chemical Process Principles Part II;* Hougen & Watson, *Chemical Process Principles Chart.*

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

CG. 401.—Industrial Instrumentation and Control. 2 hours and 3 hours laboratory or equivalent. 3 credits. Prerequisites: MS. 354, PS. 206 and one of the following: CG. 348 or ML. 385. Offered 1.

The fundamentals and principles of application of instruments and automatic control to industrial processes, designed for the engineer who will have occasional contact with instrument and control problems in research or industry. LaJoy, *Industrial Automatic Controls.*

CG. 405.—Chemical Process Problems I. 3 hours. 3 credits. Admission by permission of instructor. Offered 1.

Selected problems encountered in chemical engineering in the areas of mass, momentum, and energy transfer.

CG. 406.—Chemical Process Problems II. 3 hours. 3 credits. Admission by permission of instructor. Offered 2. Continuation of CG. 405.

CG. 442.—Chemical Engineering Seminar. 1 hour. 1 credit. Offered 2.

CG. 443.—Chemical Engineering Laboratory. 6 hours. 2 credits. Prerequisite: CG. 356. Offered 1.

Experiments in chemical engineering operations.

CG. 444.—Chemical Engineering Laboratory. 6 hours. 2 credits. The second half of the course CG. 443-444. Prerequisite: CG. 457. Offered 2.

CG. 451.—Chemical Engineering Economics. 2 hours. 2 credits. Prerequisite: CG. 356. Prerequisites or corequisites: CG. 443 and CG. 457. Offered 1.

Applications of principles of economics to chemical engineering problems in the selection of equipment and the replacement of equipment; in cost accounting and estimates involved in plant operations and plant design.

CG. 454.—Chemical Engineering Process Design. 3 hours and 6 hours laboratory or equivalent. 5 credits. Prerequisites or corequisites: EM. 369, CG. 444, CG. 451, CG. 457, and CG. 465. Offered 2.

Elementary kinetics, application of unit operations and unit processes in industry and design of equipment based on laboratory experiments. Hougen & Watson, *Chemical Process Principles, Part III.*

CG. 457.—Principles of Chemical Engineering III. 3 hours. 3 credits. Prerequisite: CG. 356. Third part of course CG. 355, 356, 457. Offered 1.

Fundamental Chemical Engineering operations:—Solid-liquid extraction, liquid-liquid extraction, distillation, gas absorption, adsorption, crystallization and agitation.

CG. 465.—Chemical Engineering Thermodynamics II. 3 hours. 3 credits. Prerequisite: CG. 364. The second half of course CG. 364, 465. Offered 1.

Thermodynamics of solutions, physical and chemical equilibrium with applications to unit operations, the third law of thermodynamics.

CG. 530.—Nuclear Chemical Engineering. 3 hours. 3 credits. Prerequisites: CY. 402; and NR. 400 or CY. 560. Offered 2.

Review of nuclear physics and radiochemistry. Preparation of nuclear fuels, types of reactors and fuel processing. Radiation damage.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

CG. 532.—Chemical Process Economics. 3 hours. 3 credits. Prerequisite: Bachelor's degree in chemical engineering or equivalent. Offered 1.

The application of economic principles to the design and operation of equipment and plants in the chemical process industries.

CG. 567.—Protective and Decorative Organic Coatings I. 2 hours and 3 hours laboratory or equivalent. 3 credits. Prerequisites: CG. 356 and CY. 302. Offered 1.

Natural and synthetic oils and resins as related to the coating industry; varnish and lacquers; solvents, driers and plasticizers. Theories of oxidation and polymerization, film formation, and film evaluation are discussed.

CG. 568.—Protective and Decorative Organic Coatings II. 2 hours and 3 hours laboratory or equivalent. 3 credits. Prerequisite: CG. 567. Offered 2.

Principles involved in the manufacture of pigments and pigmented coatings; paint manufacturing equipment and process design; oil and emulsion paints; industrial finishes; examination and evaluation of coatings; paint film defects.

CG. 571.—Technology of Pulp and Paper. 3 hours. 3 credits. Prerequisites or corequisites: CG. 356, CG. 457. Offered 1.

Lectures, recitations and problems on the principles underlying pulping procedures; raw materials; operation of the woodyard; chemical recovery system; methods of digestion and treatment of the pulp; cellulose and reactions involved in the chemical degradation of cellulose; lignin chemistry in relation to pulping methods; by-products from pulping reactions. Deinking of old paper. Test of pulp, hot refining. J. N. Stephenson, *Pulp and Paper Manufacture, Volume I, Preparation and Treatment of Wood Pulp.*

CG. 572.—Technology of Pulp and Paper. 3 hours. 3 credits. Offered 2.

Fiber preparation for the paper machine. Fiber bonding. The art of paper making. Sheet formation, filling, loading, sizing, wet strength. The Foudrinier paper machine, the cylinder machine, the press section, drying of paper, calendering and supercalendering; book, fancy, and functional paper. Converting, laminating, pigment coating, coating with resinous material and lacquer, paper plastics. Testing of paper and coated paper. J. N. Stephenson, *Pulp and Paper Manufacture, Vols. II and III.*

CG. 581.—Technology of Resins, Plastics, and Elastomers. 3 hours or equivalent. 3 credits. Prerequisite: CY. 628 or equivalent. Offered 2.

Problems and discussions in the practical aspects of resins, plastics, and elastomers, including preparation of raw materials, testing, processing, and commercial applications of such high molecular weight materials.

GRADUATE COURSES

Though no graduate major may be completed without adequate course work on the 600 level, all courses in Chemical Engineering numbered 500 and above and CG. 401—Industrial Instrumentation and Control—are available for graduate credit, subject to committee approval, as a part of a candidate's major.

CG. 611.—Organic Chemical Processing. 3 hours or equivalent. 3 credits.

The fundamental principles involved in the manufacture of organic compounds.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

CG. 612.—Advanced Chemical Engineering. 3 hours or equivalent. 3 credits.

Problems and discussion on unit operations of chemical engineering including the application of economic balance to design and operation.

CG. 613.—Advanced Chemical Engineering Calculations. 3 hours. 3 credits. Prerequisite MS. 420 or MS. 521. Offered 1.

The application of mathematics to chemical engineering calculations including dimensional analysis, correlation of data, ordinary and partial differential equations, numerical, graphical, and machine computations. Sherwood and Reed, *Applied Mathematics in Chemical Engineering;* Marshall and Pigford, *The Application of Differential Equations to Chemical Engineering Problems.*

CG. 621.—Distillation & Gas Absorption. 3 hours or equivalent. 3 credits. Offered 2.

A comprehensive review is made of the fundamental principles of distillation and gas absorption. These principles are applied to the design of equipment for both binary and multi-component systems. Robinson and Gilliland, *Elements of Fractional Distillation;* Sherwood and Pigford, *Absorption and Extraction.*

CG. 622.—Chemical Engineering Kinetics. 3 hours or equivalent. 3 credits. Offered 1.

A detailed study is made of the rates of homogeneous, heterogeneous, and catalytic reactions in gaseous and condensed systems. Both theoretical and practical studies of rates are applied to the design of chemical processes and equipment. Hougen and Watson, *Chemical Process Principles, Part III.*

CG. 623.—Diffusional Operations Process Design. 3 hours. 3 credits. Prerequisite: CG. 621. Offered 2.

The process design of equipment for diffusional operations based on performance and economic optima.

CG. 625.—Chemical Engineering Processing Equipment. 3 hours. 3 credits. Offered 1.

A study of industrial equipment available for commercially carrying out the various unit operations such as fluid flow, heat transfer, evaporation, drying, filtration, etc. Specific examples of both organic and inorganic processes will be used to show how several operations must be made mutually compatible in a complete process. Problems in choice of equipment involving relative costs, efficiencies, plant space requirements and qualities imparted to the material handled.

CG. 631.—Advanced Chemical Engineering Thermodynamics. 3 hours or equivalent. 3 credits. Offered 2.

Advanced problems in the application of thermodynamics to industrial processes.

CG. 641.—Heat Transmission and Fluid Flow. 3 hours or equivalent. 3 credits. Offered 1.

Extension of elementary principles to more advanced problems in steady and unsteady heat flow to fluids and solids including consideration of fluid flow under nonisothermal conditions. McAdams, *Heat Transmission.*

CG. 645.—Adsorption. 3 hours. 3 credits. Offered 2.

Theory of adsorption; adsorption as a unit operation of chemical engineering; manufacture, properties and applications of typical adsorbents; deionizers; testing of adsorbents.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

CG. 646.—Drying. 3 hours or equivalent. 3 credits.

Theory of drying of solids and the effects of certain variable on the rate of drying; the drying of suspensions, solutions, liquids and gases.

CG. 648.—Micromeritics. 3 hours. 3 credits.

Study of the properties of fine particles and their effect in engineering problems relating to soils, flow of materials, filtration, separating operations and catalytic reactions. Dalla Valle, *Micromeritics.*

CG. 651.—Industrial Adaptability of Ceramics. 3 hours or equivalent. 3 credits.

Study of origin, location of deposits, and uses of the non-metallic minerals and the application of the phase rule in developing industrial uses. Ladoo, *Non-Metallic Minerals.*

CG. 652.—Production Control in Inorganic Industries. 3 hours or equivalent. 3 credits.

The efficiency of recovery of products manufactured in an inorganic chemical industry and the relationship of costs of production to the technical efficiency of the various unit operations.

CG. 655.—Corrosion. 3 hours. 3 credits.

Fundamentals of corrosion and its mitigation; the selection of construction materials to prevent corrosion in process equipment; methods and equipment used by the corrosion engineer. McKay and Worthington, *Corrosion Resistance of Metals and Alloys.*

CG. 661.—Fermentation Industries. 3 hours or equivalent. 3 credits.

Fundamentals of the fermentation process; ethyl alcohol, glycerol, acetonebutanol, lactic acid, acetic acid and butylene glycol; mold fermentations; production of commercial yeast, enzymes and antibiotics. Prescott and Dunn, *Industrial Microbiology.*

CG. 663.—Petroleum Technology. 3 hours or equivalent. 3 credits. Offered 2.

Composition of petroleum gases, liquids and solids; fractionation of crude oils and studies of the physical properties of the components. Multicomponent distillation; absorption; thermal and catalytic cracking; polymerization and isomerization including the application of thermodynamics to these processes. Nelson, *Petroleum Refinery Engineering;* Perry, *Chemical Engineers Handbook.*

CG. 667.—Special Topics in Organic Coatings. 3 hours or equivalent. 3 credits.

Fundamental theory and application of oils, resins, polymers, and pigments in architectural and industrial coatings will be discussed, together with the latest developments in this field. Payne, *Organic Coating Technology, Vol. I;* von Fischer, *Paint and Varnish Technology.*

CG. 673.—The Purification of Pulps. 2 hours and 3 hours of laboratory. 3 credits.

Class and laboratory work on methods of converting pulps into bleached, dissolving grades and other high alpha-cellulose pulps; multi-stage bleaching, the use of chlorine dioxide and hydrogen peroxide. Purification methods needed for various end uses such as white paper, sanitary papers, nitration, acetylation, and xanthation are considered.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

CG. 674.—The Alkali Recovery System of the Kraft Process. 3 hours. 3 credits.

Methods and operations involved in recovery of chemicals in the kraft process. Problems in the water balance, the heat balance, the sodium balance, and the sulfur balance are taken up in detail as well as the operation of causticizing and lime recovery and the use of bark burning furnaces. A study is made of black liquor evaporation and the combustion of the concentrated liquor for burning the organic matter from the sodium salts, for reduction of the sulfur-containing salts to sodium sulfide, and for utilizing the heat produced in the generation of steam. J. N. Stephenson, *Pulp and Paper Manufacture, Volume I, Preparation and Treatment of Wood Pulp.*

CG. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

CG. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2, 3.

CHEMISTRY

Instructional Staff 1956-57

Sisler, H. H., Head; Anthony, D. S., Baxter, J. F., Black A. L., Black, A. P., Brey, W. S., Jr., Brown, H. C., Buswell, A. M., Butler, G. B., Dresdner, R. D., Eidsness, F. A., Fisher, D. E., Gropp, A. H., Hawkins, J. E., Jones, W. M., Kerr, J. E. D., Long, G. G., Muschlitz, E. E., Jr., Otte, J., Pearce, J. M., Pollard, C. B., Price, G. D., Reid, C. E., Ryschkewitsch, G. E., Savitsky, G. B., Simons, J. H., Spencer, H. G., Stearns, T. W., Tarrant, P., Thomas, G. A., Tucker, W. C., Jr., Wethington, J. A., Jr., Young, J. A.

Three beginning courses in Chemistry are offered: CY. 109-110, CY. 217-218, and CY. 121-122-(123). *No previous chemistry is required for registration in any of these three sequences.* CY.109-110 is a non-laboratory, terminal course not open to science and engineering students. CY.217-218 is designed for upper percentile students; it is normally the first course for students majoring in any branch of science or engineering, including premedical students, and meets the prerequisites for CY. 331 or CY. 301 in two semesters. CY. 121-122-123 is designed for those students whose preparation and background indicate that they may require more than two semesters to complete General Chemistry and Qualitative Analysis. The sequence CY. 121-122-123 meets the prerequisites for CY. 331 or CY. 301 in three semesters. Duplicate credit in both CY. 217 and CY. 121, or in both CY. 218 and CY. 122 or CY. 123 will not be given. Chemistry majors should consult Dr. C. E. Reid, 206 Leigh Hall.

CY. 109.—Elements of Chemistry. 2 hours and 2 hours lecture-demonstration. 3 credits. The first half of the course CY. 109-110. Offered 1.

A terminal course presenting selected topics in inorganic and organic chemistry and emphasizing the contributions of chemistry to modern life.

CY. 110.—Elements of Chemistry. 2 hours and 2 hours lecture-demonstration. 3 credits. The second half of the course CY. 109-110. Offered 2.

CY. 121.—General Chemistry. 3 hours and 3 hours laboratory. 4 credits. The first half of the course CY. 121-122. Offered 1, 2, 3.

Fundamental laws and theories of chemistry. Non-metallic elements and their compounds; metals and their compounds and some of their uses.

CY. 122.—General Chemistry. 3 hours and 3 hours laboratory. 4 credits. The second half of the course CY. 121-122. Offered 1, 2, 3.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

CY. 123.—Qualitative Analysis. 2 hours and 3 hours laboratory. 3 credits. Prerequisite: CY. 122. Offered 1, 2, 3.

Theoretical principles and laboratory techniques involved in the qualitative detection of the common ions. This course will not count for credit toward the B.S. in Cy. degree.

CY. 217.—General Chemistry and Qualitative Analysis. 3 hours and 3 hours laboratory. 4 credits. The first half of the course CY. 217-218. Prerequisites: Upper percentile rating in placement tests in physical sciences and mathematics or satisfactory completion of C-2. Prerequisite or corequisite: MS. 105. Offered 1, 2, 3.

Principles of chemistry; the descriptive chemistry of familiar elements and inorganic compounds from a structural point of view; an introduction to ionic separations and the detection of selected ions.

CY. 218.—General Chemistry and Qualitative Analysis. 3 hours and 3 hours laboratory. 4 credits. The second half of the course CY. 217-218. Offered 1, 2, 3.

CY. 301.—Organic Chemistry. 3 hours and 3 hours laboratory. 4 credits. The first half of the course CY. 301-302. Prerequisite: CY. 123 or CY. 218. Offered 1, 2.

Preparation and properties of the various aliphatic and aromatic compounds.

CY. 302.—Organic Chemistry. 3 hours and 3 hours laboratory. 4 credits. The second half of the course CY. 301-302. Offered 2, 3.

CY. 315.—The Chemistry of Water Treatment. 2 hours and 3 hours laboratory. 3 credits. Prerequisite: CY. 123 or CY. 218. Offered 2.

A theoretical and practical study of the examination and treatment of water.

CY. 316.—The Chemistry of Water Treatment. 3 hours laboratory. 1 credit. Prerequisite: CY. 123 or CY. 218. Corequisite: CY. 315. Not available to students who have credit for CY. 331 or equivalent.

CY. 317.—Physical Chemistry. 3 hours, and 3 hours laboratory. 4 credits. Prerequisites: CY. 331, MS. 105. Corequisite: Organic Chemistry. Offered 1.

Properties of solutions, chemical equilibrium, pH, the colloidal state; particular emphasis on biochemical applications. Designed primarily for students of medicine, pharmacy, biology, and related fields.

CY. 331.—Introductory Quantitative Analysis. 2 hours, and 6 hours laboratory. 4 credits. Prerequisite: CY. 123 or CY. 218. Offered 1, 2, 3.

Theoretical principles and laboratory technique involved in quantitative determinations. Determinations include gravimetry, acidimetry and alkalimetry, oxidimetry and iodimetry.

CY. 332.—Quantitative Analysis. 2 hours, and 6 hours laboratory. 4 credits. Prerequisite: CY. 331. Offered 2.

Emphasis will be placed on quantitative determinations which depend upon separation of various constituents.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

***CY. 362.—Organic Chemistry.** 3 hours. 3 credits. Prerequisite: CY. 122 or CY. 218. Offered 1, 2, 3.

A brief elementary course embracing the more important aliphatic and aromatic compounds.

CY. 363.—Organic Chemistry. 6 hours laboratory. 2 credits. Corequisite: CY. 362. Offered 1, 2, 3.

CY. 400.—Chemistry for Teachers. 6 credits. Prerequisite: one year of college chemistry. Offered 3.

This course is designed primarily for teachers who wish to expand either their background in chemistry or to refresh themselves with a modern approach. It will consist of a combination of lecture and laboratory work, reviewing fundamentals of chemistry and stressing recent developments and techniques in the field.

****CY. 401.—Physical Chemistry.** 3 hours. 3 credits. The first half of the course CY. 401-402. Prerequisites: PS. 202 or PS. 206, and MS. 354. Offered 1, 2.

Matter in the three states, elementary thermodynamics, solutions, colloids, electricity as applied to chemistry, homogenous and heterogeneous equilibria, chemical kinetics, introduction to quantum theory.

****CY. 402.—Physical Chemistry.** 3 hours. 3 credits. The second half of the course CY. 401-402. Offered 2, 3.

CY. 405.—Physical Chemistry. 3 hours laboratory. 1 credit. Prerequisite: CY. 331. Corequisite: CY. 401. Offered 1, 2.

CY. 406.—Physical Chemistry. 3 hours laboratory. 1 credit. The second half of the course CY. 405-406. Corequisite: CY. 402. Offered 2, 3.

CY. 411.—Inorganic Chemistry. 2 hours, and 3 hours laboratory. 3 credits. Prerequisite: CY. 401. Offered 2.

Advanced systematic inorganic chemistry, including inorganic synthesis.

CY. 412.—Physical Chemistry. 2 hours, and 3 hours laboratory. 3 credits. Prerequisite: CY. 402. Offered 2.

Radiation and chemical change; structure of matter, radioactivity, photochemistry.

CY. 415.—Biochemistry. 2 hours, and 3 hours laboratory. 3 credits. Prerequisite: CY. 302. Offered 1.

Lectures, assigned readings, and laboratory techniques on carbohydrates, proteins, lipids, colloids, enzymes and vitamins.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

*This lecture course may not be taken without the corresponding laboratory course except by special permission.

**These lecture courses may not be taken without the corresponding laboratory courses (CY. 405, CY. 406) except by physics majors, or by special permission of the instructor.

CY. 416.—Industrial Chemistry. 3 hours. 3 credits. Prerequisite: CY. 302.

Industrial organic and inorganic procedures, involving the preparation on a commercial scale of acids, alkalies, fertilizers, petroleum products, etc., with emphasis on fundamental chemical principles involved.

CY. 481.—Chemical Literature. 1 hour or its equivalent. 1 credit. Prerequisite: 3 years of chemistry. A reading knowledge of French and German is desirable. Offered 1, 2.

The present sources of published chemical information.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

CY. 501 — (Identical with NR 501).—Radiation Processes. 2 hours and 3 hours laboratory. 3 credits. Prerequisite: CY. 402. Offered 1.

Photochemistry; chemical and physical effects caused by ionizing radiation. Radiation synthesis, catalysts, food sterilization, use of high intensity sources in the process industries.

CY. 510.—Chemistry for Nuclear Engineers. 3 hours. 3 credits. Prerequisites: CY. 218 or 123 or their equivalent; MS. 354 or its equivalent; PS. 202 or 206 or their equivalent.

Fundamental concepts of chemistry, states of matter, chemical combinations, atomic structure, types of reaction, chemical equilibrium, solutions, radiochemical separations and analysis, chemistry of heavy metals and fission products, radiation chemistry, isotope separation. Not open for credit to chemistry majors nor graduate students who are candidates for degrees in chemistry.

CY. 514.—Organic Chemistry. 2 hours and 6 hours laboratory. 4 credits. Prerequisite: CY. 302. Offered 1.

Typical reactions which are utilized in the synthesis and proof of structure of organic compounds; the qualitative detection of various functional groups and quantitative determination of carbon, hydrogen and nitrogen in organic compounds. Laboratory techniques, methods for oxidation and reduction, high pressure catalytic reactions and material costs of certain synthesis are studied.

CY. 560.—Radiochemistry. 2 hours and 3 hours laboratory. 3 credits. Prerequisite: CY. 401, CY. 402 or permission of instructor.

Elementary nuclear structure as related to radioactivity. The fundamental properties of, and laws governing, nuclear radiations. Tracer techniques and use of radioactive materials in the laboratory.

GRADUATE COURSES

Prerequisites: New graduate students should have 40 hours of undergraduate chemistry courses including General Chemistry (may include qualitative analysis)—eight semester hours; Analytical Chemistry—eight semester hours; Organic Chemistry—ten semester hours; Physical Chemistry—eight semester hours; Chemical Literature—one semester hour. Students having less than ten hours of Organic Chemistry must take CY. 514. Any deficiency in the prerequisites must be satisfied as soon as possible after entering the Graduate School.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

New graduate students should report immediately to the Head of the Department for special instruction with respect to registration and accreditation of work.

All graduate students are expected to attend appropriate seminars.

Certain of the courses listed are offered each year while others are offered as required. For the complete listing of graduate courses for a given semester the student should consult the Schedule of Courses for that semester.

All doctoral candidates are required to take a fifteen-hour core of chemical courses covering the major areas of the field. These courses are CY. 602, CY. 606, CY. 621, CY. 623 and CY. 633.

CY. 601.—Organic Preparations. 9 hours or its equivalent. 3 credits. Offered 1.

Lectures and laboratory to acquaint the student with the reactions and techniques used in the synthesis of organic compounds.

CY. 602.—Structure Inorganic Chemistry. 3 hours. 3 credits. Prerequisite: CY. 623. Offered 2.

Structural, valency, molecular association and stereochemistry of inorganic compounds.

CY. 603. — (Identical with NR. 603).—Advanced Radiation Processes. 3 hours. 3 credits. Prerequisites: (NR) CY. 501 or equivalent.

Advanced radiation chemistry for the research workers in this field and for nuclear engineers. A study of the interaction of ionizing radiation with solids, liquids, gases, and biological systems.

CY. 604.—Inorganic Preparations. 9 hours laboratory or its equivalent. 3 credits.

CY. 605.—Organic Nitrogen Compounds. 3 hours. 3 credits. Prerequisite: CY. 514. Offered 2.

Lectures, seminars and collateral reading relative to the synthesis, reactions, and uses of organic compounds containing nitrogen. Selection of topics variable.

CY. 606.—Advanced Organic Chemistry. 3 hours. 3 credits. Prerequisite: CY. 623. Offered 2.

Correlation of organic chemical reaction types with emphasis upon electronic displacement effects, carbonium ion reactions, radical reactions, displacement reactions and elimination reactions.

CY. 609.—Electrochemistry of Solutions. 3 hours. 3 credits. Prerequisite: CY. 621.

A study of the theories of solutions from the standpoint of conductometric and electrometric phenomena; methods of measurements and applications.

CY. 613.—Colloids. 3 hours. 3 credits.

The preparation and study of the behavior of various types of colloid systems; the phenomenon of adsorption; applications.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

CY. 615.—Advanced Inorganic Chemistry. 3 hours. 3 credits. Prerequisite: CY. 602.

A systematic study of the nonmetals, with emphasis on the relation of properties to atomic, molecular, and crystal structures.

CY. 616.—Advanced Inorganic Chemistry. 3 hours. 3 credits. Prerequisite: CY. 602.

A systematic study of the metals, with emphasis on the relation of properties to atomic, molecular, and crystal structures. Special attention will be given to the nuclear fission product elements.

CY. 618.—Qualitative Organic Chemistry. 1 hour and 6 hours laboratory. 3 credits. Prerequisite: CY. 514. Offered 2.

The identification of organic compounds.

CY. 621.—Chemical Thermodynamics. 3 hours. 3 credits. Offered 2.

Energetics, properties of ideal and non-ideal systems primarily from the standpoint of classical thermodynamics.

CY. 622.—Chemical Thermodynamics. 3 hours. 3 credits. Prerequisite: CY. 621.

A treatment of statistical thermodynamics.

CY. 623.—Advanced Physical Chemistry. 3 hours. 3 credits. Offered 1.

The topics covered will include: Electronic structure of the atom; theory of valence; molecular structure; crystals; kinetic molecular treatment of gases and liquids; phase rule; chemical kinetics; nuclear reactions.

CY. 624.—Chemical Kinetics. 3 hours. 3 credits. Prerequisite: CY. 621 or CY. 623.

Rates and mechanism; homogeneous and heterogeneous catalysis.

CY. 625.—Chemistry of the Terpenes. 3 hours. 3 credits.

The monocyclic terpenes and related hydroaromatic compounds.

CY. 626.—Chemistry of the Terpenes. 3 hours. 3 credits.

The dicyclic terpenes and their derivatives.

CY. 627.—Laboratory Distillation. 3 hours or its equivalent. 3 credits.

Desirable prerequisite differential equations. Simple and fractional distillation; steam distillation; molecular distillation. Determination of the number of theoretical plates, the optimum reflux ratio and the sharpness of separation using packed columns.

CY. 628.—Chemistry of High Polymers. 2 hours and 3 hours laboratory. 3 credits.

A fundamental approach to the chemistry of high polymers, with special emphasis upon the mechanisms of polymerization reactions, and the relationship of physical properties to chemical constitution.

CY. 629.—Water Supply and Treatment. 3 hours or its equivalent. 3 credits. Offered 1.

A survey of Florida hydrology and a discussion of the most recent developments in the treatment and stabilization of municipal and industrial water supplies.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

CY. 630.—Physical-Organic Chemistry. 3 hours. 3 credits.

The theory and application of physical methods in the study of the behavior of organic compounds.

CY. 631.—Semi-Micro and Micro Inorganic Analysis. 1 hour, and 6 hours laboratory. 3 credits.

CY. 633.—Instrumental Analysis. 2 hours and 3 hours laboratory. 3 credits. Offered 1.

An introduction to optical and electrochemical methods as applied to the analysis of solutions.

CY. 634.—Instrumental Analysis. 1 hour and 6 hours laboratory. 3 credits Prerequisite: CY. 633. Offered 2.

Infrared and ultra-violet spectrophotometry; polarography.

CY. 635.—Industrial Water Treatment. 3 hours or its equivalent. 3 credits. Prerequisite: CY. 629. Offered 1.

CY. 638.—Quantitative Organic Chemistry. 9 hours laboratory or its equivalent. 3 credits. Prerequisite: CY. 514.

CY. 639.—The Analytical Control of Water Treatment. 1 hour and 6 hours laboratory. 3 credits. Prerequisite: CY. 629. Offered 2.

A laboratory course dealing with the most recent development in analytical techniques and the separation and determination of components not ordinarily determined in water analysis.

CY. 640.—Seminar in Water Supply and Treatment. 3 hours or its equivalent. 3 credits. Prerequisite: CY. 635. Offered 2.

A survey of the contemporary literature in the fields of water supply and treatment.

CY. 641.—Organic Fluorine Chemistry. 3 hours. 3 credits.

The preparation and properties of compounds containing fluorine with particular reference to carbon compounds.

CY. 643.—Fluorine Chemistry Laboratory Techniques. 9 hours laboratory or its equivalent. 3 credits.

The development of laboratory skills of importance in the manipulation for chemical and physical research involving fluorine-containing compounds.

CY. 646.—Fluorocarbon Chemistry. 3 hours or its equivalent. 3 credits.

The laboratory and industrial preparation of fluorocarbons and their derivatives. The properties of fluorocarbon derivatives as contrasted with analogous organic compounds. The synthetic chemistry of fluorocarbons.

CY. 647.—Biochemistry (Proteins and Colloids). 2 hours or its equivalent. 2 credits. Prerequisite: A course in general biochemistry.

Lectures and assigned readings on composition, structure, physicochemical properties and the function of the proteins; and studies on the relation of collodial systems to biochemical processes.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

CY. 648.—Biochemistry (Carbohydrates and Lipids). 2 hours or its equivalent. 2 credits. Prerequisite: A course in general biochemistry.

A comprehensive course covering all classes of carbohydrates including the monosaccharides, oligosaccharides, polysaccharides and their derived compounds; and a study of lipid chemistry.

CY. 649.—Biochemistry Laboratory (Proteins and Colloids). 3 hours laboratory. 1 credit. Prerequisite or corequisite: CY. 647.

Accompanying laboratory course for CY. 647.

CY. 650.—Biochemistry Laboratory (Carbohydrates and Lipids). 3 hours laboratory. 1 credit. Prerequisite or corequisite: CY. 648.

Accompanying laboratory course for CY. 648.

CY. 651.—Biochemistry (Enzymes). 2 hours or its equivalent. 2 credits. Prerequisite: A course in general biochemistry.

Lectures and assigned readings on enzyme action, including methods of preparation and investigation of enzymes and their function in biological and industrial processes.

CY. 652.—Biochemistry (Vitamins, Hormones, and Minerals). 2 hours or its equivalent. 2 credits. Prerequisite: A course in general biochemistry.

A study of the properties, physiological functions and methods of assay of the vitamins; physiological function and structure of hormones; and the role of common and trace elements in nutrition and agriculture.

CY. 653.—Biochemistry Laboratory (Enzymes). 3 hours laboratory. 1 credit. Prerequisite or corequisite: CY. 651.

Accompanying laboratory course for CY. 651.

CY. 654.—Biochemistry Laboratory (Vitamins, Hormones, Minerals). 3 hours laboratory. 1 credit. Prerequisite or corequisite: CY. 652.

Accompanying laboratory course for CY. 652.

CY. 656.—Biochemical Preparations. 1 hour and 6 hours laboratory. 3 credits. Offered 2. Prerequisite: A course in biochemistry and permission of the instructor.

The isolation of biologically important compounds from natural sources; the techniques of extraction, separation and purification; the utility, limitations, evaluation and maintenance of laboratory apparatus.

CY. 658.—The Analysis of Compounds Containing Fluorine. 9 hours laboratory or its equivalent. 3 credits.

Methods of analysis not duplicable or closely similar to methods used for other elements.

CY. 659.—Seminar in Fluorine Chemistry. 3 hours or its equivalent. 3 credits. Offered 1, 2.

CY. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

CY. 721.—Theory of Molecular Structure. 3 hours. 3 credits. Prerequisites: CY. 623 and PS. 612.

Mathematical treatment of valence bonding and molecular structure. Heitler-London and molecular orbital methods.

CY. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2, 3.

CIVIL ENGINEERING

Instructional Staff 1956-57

Kluge, R. W., Head; Bransford, T. L. (On Leave); Comins, H. D., Furman T. deS., Gilcreas, F. W., Hargett, E. R., Hendrickson, E. R., Katterhenry, A. A., (On Leave); Kiker, J. E., Lackey, J. B., Ozell, A. M., Richart, F. E., Sawyer, D. A., Schmertmann, J. H., Smith, D. B., (On Leave); Spangler, B. D., Townsend, H. D., Winsor, A. N., Zia, Paul, Zimpfer, W. H.

CL. 223.—Surveying. 2 hours and 3 hours field practice. 3 credits. Prerequisite: MS. 105. Offered 1, 2, 3.

Use of surveyors tape, level and transit; traversing and balancing surveys; calculation of areas; topographic mappings; land subdivision; adjustment of instruments; plane table surveys.

CL. 226.—Higher Surveying. 1 hour and 3 hours field practice. 2 credits. Prerequisite: CL. 223. Offered 1, 2, 3.

Triangulation systems; precise base-line measurement; map projections; coordinate systems; precise levels; line azimuth by Solar and Polaris observation; hydrographic surveys; introduction to photogrammetry; horizontal curves; cross-sections.

CL. 301.—Forest Surveying. 1 hour and 6 hours field practice. 3 credits. Prerequisite: CL. 223. Offered 2.

Topographic mapping; resurvey of land lines and boundaries; timber road detail by compass and Abney level; mapping and traverse from aerial photograph data; plane table surveys; stadia measurements; line-azimuth determination; leveling.

CL. 303.—Elements of Photogrammetry. 2 hours and 3 hours laboratory or field practice. 3 credits. Prerequisite: CL. 226 or CL. 301. Offered 1, 2.

The place of photogrammetry in surveying, mapping and general application to engineering, agriculture and industrial development; aerial photography, cameras, flying height; geometry of aerial photos, scale, tilt, stereoscopy, parallax, plotting instruments; photo interpretation; mosaic construction.

CL. 311.—Structural Drawing. 6 hours drawing. 2 credits. Prerequisite: EGR. 182. Offered 1, 2.

Structural representation; detailing beams, columns, trusses, built-up girders, rivcted and welded joints, reinforced concrete members, and timber connections from design drawing.

CL. 323.—Materials Laboratory. 1 hour and 2 hours laboratory. 2 credits. Corequisite: EM. 377. Offered 1, 2.

The principal materials used for engineering purposes, excluding concrete, with special attention to their physical properties and the reason for the importance of these properties to the engineer; definitions and methods of measurement.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

CL. 326.—Statics of Simple Structures. 3 hours and 3 hours problems session. 4 credits. Prerequisite: EM. 365. Offered 1, 2, 3.

Applications of the methods of statics to structural analysis; a correlation between graphical and analytical methods; moments, shears, reactions, resultants, stress diagrams, and influence lines for statically determinate structures.

CL. 328.—Water Supply Sanitation. 2 hours. 2 credits. Offered 1, 2.

The selection and protection of sources of supply with emphasis on the public health aspects of water supply development and distribution. Hardenbergh, *Water Supply and Purification.* (This course is identical with CL. 329, except that the design of water systems is eliminated.)

CL. 329.—Water Supply and Treatment. 2 hours and 3 hours design. 3 credits. Corequisite: EM. 327. Offered 1, 2.

Sources of supply, methods of treatment; the design of water systems including supply, treatment, and distribution. Hardenbergh, *Water Supply and Purification.*

CL. 332.—Plain Concrete. 1 hour and 3 hours laboratory. 2 credits. Prerequisite: EM. 377. Offered 1, 2.

Characteristics of materials used in making plain concrete; methods of mixing, transporting, placing and curing; design of concrete mixes; specifications.

CL. 338.—Statically Indeterminate Structures. 3 hours. 3 credits. Prerequisites: CL. 326, EM. 377. Offered 1, 2.

A fundamental course in the elastic properties of structures; slope and deflection of beams and trusses; redundant systems, continuous beams, frames; special methods include moment area, elastic weight, consistent deflection, slope deflection and moment distribution.

CL. 368.—Strength of Materials Laboratory. 3 hours laboratory. 1 credit. Corequisite: EM. 367. Offered 1, 2.

A laboratory course of experiments involving the strength and physical properties of engineering materials that are studied in Strength of Materials.

CL. 412.—Civil Engineering Seminar. 1 hour. 1 credit. Prerequisite: Senior standing in Civil Engineering. Offered 1, 2.

Reports on current civil engineering literature; discussions of engineering developments; engineering organizations, publications and activity.

CL. 415.—City and Regional Planning. 2 hours and 3 hours laboratory. 3 credits. Prerequisite: Senior engineering classification. Offered 1, 2.

Principles of planning and zoning with emphasis on application to smaller cities. Street systems, neighborhood units, transportation problems, utilities, and subdivisions. Urban blight and redevelopment, slum clearance, public housing and Federal aid. Basic principles and objectives of "Regional Planning."

CL. 422.—Sanitary Engineering. 2 hours and 3 hours laboratory, or equivalent. 3 credits. Prerequisite: CL. 329 or consent of instructor. Offered 1.

The relation of man to his environment and the principles of engineering methods employed in environmental control in the interest of public health. The areas included are classified into three major environmental contacts, air, water and food, but exclude municipal water supply and sewage disposal in which special instruction is offered in other courses. Hopkins and Schulze, *The Practice of Sanitation.*

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

CL. 424.—Soil Mechanics. 2 hours and 3 hours laboratory. 3 credits. Prerequisites: GY. 210, EM. 377. Offered 1, 2.

Origin and composition of soils; subsurface exploration and sampling; routine testing and classification; permeability and capillarity of soils; stresses in soil masses; consolidation; settlement analysis; strength theory, shear testing, shearing resistance, stability of slopes; earth pressures.

CL. 427.—Sanitary Engineering Laboratory. 1 hour and 6 hours laboratory. 3 credits. Prerequisite: CL. 328 or CL. 329. Offered 2.

Laboratory studies in physical, chemical and microbiological aspects of Sanitary Engineering; laboratory tests and pilot plant experiments relative to the treatment of water, sewage and industrial wastes; laboratory demonstrations of phosphatase tests and pasteurization; problems of bacteriology in relation to environmental sanitation, including sewage, industrial wastes, water, milk, food dispensing establishments, swimming pools and bathing beaches, with particular emphasis on the use and interpretation of indices of pollution. American Public Health Association, *Standard Methods for the Examination of Water and Sewage.*

CL. 428.—Sanitary Engineering Laboratory. 1 hour and 6 hours laboratory. 3 credits. The second half of the course CL. 427-428. Offered 1.

CL. 429.—Sewerage. 2 hours and 3 hours design. 3 credits. Prerequisite: EM. 327. Offered 1, 2.

The hydraulics and design of sewerage systems and sewage treatment plants, including a study of the elementary principles of sewage treatment. Babbit, *Sewerage and Sewage Treatment.*

CL. 433.—Design in Reinforced Concrete. 3 hours. 3 credits. Prerequisite: CL. 338. Offered 1, 2.

The principles of reinforced concrete design; design of beams for bending; combined bending and axial loads; bond, shear, and web reinforcing; columns; footings; retaining walls.

CL. 435.—Design in Metals and Timber. 2 hours and 3 hours design. 3 credits. Prerequisites: EM. 377, CL. 326. Offered 1, 2.

The structural design of metal and timber elements; connections, tension and compression members, members subjected to combined bending and axial loads.

CL. 439.—Highway Location and Drainage. 2 hours and 3 hours field and office. 3 credits. Prerequisite: CL. 226. Offered 1, 2.

Highway location and location surveys; preparation of plans and estimates; design standards, traffic surveys; earthwork computations; surface and subsurface highway drainage.

CL. 443.—Foundation and Harbor Structures. 1 hour and 3 hours design. 2 credits. Prerequisites: CL. 424, CL. 433. Offered 1, 2.

Analysis and design of foundations, harbor structures, retaining walls, and sheet piling; soil bearing capacity and the design of footings; pile and pile groups; cofferdams; bridge piers and abutments.

CL. 444.—Construction Methods and Estimating. 3 hours. 3 credits. Prerequisite. Senior Classification. Offered 1, 2.

The construction industry; estimates; types of construction; construction methods; contracts; law of sales; patents.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

CL. 450.—Highway Construction and Materials. 2 hours and 3 hours laboratory. 3 credits. Prerequisite: CL. 439. Offered 1, 2.

Construction equipment and methods; highway materials and their use; construction specifications; bituminous pavements; rigid pavements; highway maintenance.

CL. 525.—Sewage and Industrial Waste Treatment. 3 hours. 3 credits. Prerequisites: CL. 429 or consent of instructor. Offered 2.

A study is made of characteristics of sewage, its effect upon streams, and methods of disposal. A thorough study is made of sewage treatment methods with emphasis upon physical and biochemical changes that occur. General aspects of the industrial waste problem are covered including detailed study of wastes of a sufficient number of individual industries to illustrate the principle. Imhoff and Fair, *Sewage Treatment.* Rudolfs, *Industrial Waste Disposal and Treatment.*

CL. 533.—Design in Prestressed Concrete. 3 hours. 3 credits. Prerequisite: CL. 433. Offered 2.

The principles of prestressed concrete, materials used in prestressed concrete, design of beams for bending, post-tensioned and pre-tensioned beams, bond and diagonal tension, review of existing specification, and special problems in prestressed concrete.

CL. 540.—Highway Design. 2 hours and 3 hours laboratory. 3 credits. Prerequisite: CL. 439. Offered 2.

Geometric design; design of flexible pavements; design of concrete pavements.

CL. 546.—Highway Bridges. 2 hours and 3 hours design. 3 credits. Prerequisites: CL. 433, CL. 435. Offered 2.

The design of highway bridges of reinforced concrete and of steel; study of highway specifications; details of design; study of types and economics.

CL. 548.—Industrial and Mill Buildings. 2 hours and 3 hours design. 3 credits. Prerequisites: CL. 433, CL. 435. Offered 2.

Applications of reinforced concrete and steel design to building structures; flat slab floors; design for continuity; study of building specifications and codes.

CL. 562.—Traffic Engineering. 2 hours and 3 hours laboratory or equivalent. 3 credits. Prerequisite: CL. 439 or approval of instructor. Offered 1.

Traffic movement, traffic surveys and studies, control devices and measures, parking and zoning, roadway capacity and design.

GRADUATE COURSES

Though no graduate major may be completed without adequate course work on the 600 level, certain undergraduate courses in Civil Engineering are available for graduate credit as a part of the candidate's major. These are: CL. 422—Public Health Engineering, CL. 427-428—Public Health Engineering Laboratory, CL. 525—Sewage and Industrial Waste Treatment, CL. 540—Highway Design, CL. 546—Highway Bridges, CL. 548—Industrial and Mill Buildings; with the exception that CL. 422 and CL. 427 may not be taken for such credit by students having previously taken a sanitary or public health engineering option in work for an undergraduate degree.

CL. 621.—Advanced Metal Structures. 3 hours. 3 credits. Prerequisite: Consent of instructor. Offered 2.

Study of elastic and inelastic behavior of engineering materials under load; problems in structural details; fatigue of structural members and materials; introduction to plastic design of steel frames.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

CL. 623.—Advanced Concrete Structures. 3 hours. 3 credits. Prerequisite: CL. 433. Offered 1, 2, 3.

Study of research in reinforced concrete particularly in connection with development of building code requirements; ultimate load theories and their application to design; prestressing; special design problems.

CL. 626.—Three Dimensional Stress Analysis. 3 hours. 3 credits. Prerequisite: CL. 338. Offered 1, 3.

The resolution of forces, computation of reactions, and calculation of forces and stresses that cannot be reduced to co-planer structures. Stress functions and applications.

CL. 627.—Advanced Sanitary Engineering. 3 hours or equivalent. 3 credits. Prerequisites: CL. 329, CL. 429. Offered 1.

An advanced study of the biological, chemical and physical principles utilized in water, sewage, and industrial waste treatment processes.

CL. 628.—Advanced Sanitary Engineering. 3 hours or equivalent. 3 credits. The second half of the course CL. 627-628. Offered 2.

CL. 630.—Problems in Sanitation. 3 hours or equivalent. 3 credits. Prerequisites: CL. 329, CL. 429 and permission of instructor. Offered 2.

Approved problems for study or research selected from any field of sanitary specialization.

CL. 638.—Analysis of Statically Indeterminate Structures. 1 to 6 credits. Prerequisite: CL. 338. Offered 1, 2, 3.

Frames with variable moment of inertia closed rings; column analogy; secondary stresses; continuous trusses; columns; design problems, precise moment distribution.

CL. 640.—Evaluation of Engineering Data. 3 hours. 3 credits. Prerequisite: MS. 354. Offered 1.

Principles of statistics as applied to the collection and study of vital statistics and other engineering data. Design of experiments and investigations.

CL. 641.—Advanced Public Health Engineering. 3 hours or equivalent. 3 credits. Prerequisite. CL. 422. Offered 2.

An advanced study of various integrants of public health engineering with special emphasis on selected problems such as ventilation and illumination, epidemiology, and food sanitation.

CL. 642.—Stream Sanitation. 3 hours. 3 credits. Prerequisites: CL. 525 or consent of instructor. Offered 2.

The principles of environmental sanitation applied to streams, lakes, and underground and tidal waters, considered as an economic asset. Water supply and waste disposal examined in the light of their inter-relationships. Also, the influence and effects of municipal and industrial wastes on public water supplies, shellfish, storage, recreational uses, industrial uses, and wildlife.

CL. 647.—Advanced Highway Engineering. 3 or 6 credits. Prerequisites: CL. 439, CL. 450. Offered 1, 2, 3.

Special problems in highway economics, planning, administration, design, and construction.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

CL. 648.—Advanced Soil Mechanics. 3 or 6 credits. Prerequisite: CL. 424. Offered 1, 2, 3.

Special problems in the application of soil mechanics to the design and construction of buildings, foundations, dams, levees, and highways.

CL. 649.—Experimental Stress Analysis. 3 hours or equivalent. 3 credits. Corequisite: CL. 638. Offered 2.

Study and application of methods for measuring static and dynamic strains. Use of analogies, photo-elasticity, and the brittle lacquer method. Study of methods for analyzing stresses in large structures.

CL. 650.—Hydrology. 3 hours. 3 credits. Prerequisite: EM. 327. Offered 1.

Occurrence and distribution of water by natural processes, including precipitation, run-off, infiltration, water losses and their emphasis upon surface and subsurface conditions peculiar to Florida. Frequency and intensity of storms and floods and effects of reservoirs in reducing them.

CL. 652.—Graduate Civil Engineering Seminar. 1 hour. 1 credit. Offered 1, 2.

Discussions and reports pertaining to the literature and development in the Civil Engineering Field.

CL. 660.—Arch Bridges. 3 hours. 3 credits. Prerequisite: CL. 338. Offered 1, 2, 3.

Numerical analysis of 2-hinged, 3-hinged and fixed arches, including the treatment of multiple-span arch ribs on elastic piers. Development and use of influence lines for spandrel braced and rib arches.

CL. 662.—Advanced Structural Laboratory. 3 credits. Prerequisite: CL. 338. Offered 1, 2.

Model studies and analysis. Applications to static and dynamic loadings. Mechanics of similitude and dimensional analysis. Vibration of beams and research studies.

CL. 664.—Advanced Structural Analysis. 3 hours. 3 credits. Prerequisites: CL. 338, EM. 366. Offered 2.

Approximate methods of analysis for structural members of variable section modulus. Vibrations of beams, including effects of axial loads and elastic supports. Evaluation of differential equations and simultaneous linear equations. Application of approximate procedures to vibrations, impact and damping.

CL. 665.—Advanced Structural Design. 3 credits. Prerequisites. CL. 621, CL. 623, CL. 638, EM. 565.

Design of continuous truss bridges, rigid frames, multiple story frames.

CL. 666.—Advanced Structural Design. 3 credits. Prerequisites: CL. 621, CL. 623, CL. 638, EM. 565.

Design of multiple span prestressed concrete bridges, thin shell roofs.

CL. 668.—Advanced Structural Problems. 1 to 6 credits. Prerequisite: Consent of instructor. Offered 1, 2, 3.

A review of outstanding research investigations and considerations of some of the unsolved structural problems. A comprehensive study of one or more structural problems of particular interest to the students.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

CL. 677.—Microbiology of Waste Treatment and Receiving Waters. 2 hours and 3 hours laboratory. 3 credits. Offered 2.

A study of the role of microorganisms, including bacteria, protozoa, algae, fungi and certain higher organisms in various waste treatment processes, as well as in streams, lakes or ocean waters which receive wastes or are used as public water supplies. Includes microscopic identification of the more important species and communities.

CL. 678.—Advanced Sanitary Engineering Practice. 1 hour and 6 hours laboratory. 3 credits. Offered 1.

Special problems in the application of sanitary examinations of water, milk, food, wastes, and air. Field exercises demonstrating the principles of water and waste treatment, and advanced problems in the interpretation of laboratory results.

CL. 679.—Advanced Sanitary Engineering Practice. 1 hour and 6 hours laboratory. 3 credits. The second half of the course CL. 678-679. Offered 2.

CL. 682.—Advanced Sanitary Engineering Design. 3 hours or equivalent. 3 credits. Prerequisites: CL. 329, CL. 429. and CL. 433. Offered 1.

Complete problems in the layout and design of water, sewage and industrial waste systems and treatment plants.

CL. 683.—Advanced Sanitary Engineering Design. 3 hours or equivalent. 3 credits. The second half of the course CL. 682-683. Offered 2.

CL. 684.—Atmospheric Pollution. 3 hours or equivalent. 3 credits. Prerequisites: CL. 427, CL. 627 and consent of instructor. Offered 2.

A study of the atmosphere as a place of disposal of certain industrial and community effluents. Effects of air pollution; classification of wastes; effect of micrometeorological factors on dispersion; problems of sampling and anaylsis; evaluation of data; abatement programs.

CL. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

CL. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2, 3.

COMMUNICATIONS

Instructional Staff 1956-57

Weimer, R. O., Director; Chenoweth, H. A., Cunningham, H. W., Davis, H. G., Franks, L. E., Newbill, M., Seil, M. D., Weaver, J. C., and Winter, W. E.

Offerings in Communications are designed primarily for those planning professional careers in these and related fields. These courses, however, may be taken for elective credit by students in all Upper Division units of the University. Students who are interested in major work in radio, television, advertising, news handling and public relations are referred to the requirements of the School of Journalism and Communications.

COM. 118.—Survey of Communications. 3 hours. 3 credits. Offered 1, 2.

An introduction to the various media of mass communications with special emphasis on newspapers, radio and television; their requirements and opportunities and their responsibilities to the public.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

COM. 201.—Writing for Mass Communications. 3 hours. 3 credits. Offered 1, 2.

A pre-professional course emphasizing the place and importance of news in modern society, with special emphasis on the fundamentals of good writing as a basis for all upper division journalism, communications, and advertising writing courses.

COM. 212.—Radio and Television Announcing. 4 hours lecture-laboratory. 3 credits. Prerequisite: SCH. 200 or permission of instructor. Offered 1, 2.

Principles and practice in announcing, narrating, and acting for broadcasting.

COM. 318.—Radio Writing. 3 hours. 3 credits. Prerequisite: COM. 212. Offered 1.

The planning and writing of the more important types of radio programs, such as interviews, musical, special events, educational dramatic. Some attention will be given to radio news writing and commentaries.

COM. 323.—Radio Programming and Production. 1 hour and 4 hours laboratory. 3 credits. Offered 1, 2.

Planning and producing programs for the local station and networks on a commercial and sustaining basis; casting, directing, rehearsing, cutting and timing.

COM. 325.—Television Production. 5 hours lecture-laboratory. 3 credits. Offered 1, 2. Prerequisites: ART 365 and COM. 323.

Elements of television, fundamentals of production, and training in studio operation.

COM. 327.—TV Writing. 3 hours. 3 credits. Prerequisite: COM. 318. Offered 2.

The theory and practice of writing for television with emphasis on the creative and practical aspects. Some attention will be given to television news writing and commentaries.

COM. 328.—Radio-TV in the Public Interest. 2 hours. 2 credits. Prerequisite: COM. 212. Offered 2.

Radio as a means of improving the informational, educational, and cultural level of the listeners; forums, interviews and other special events; use of radio and television as an educational medium.

COM. 424.—Advanced Radio Production. 1 hour and 4 hours laboratory. 3 credits. Prerequisite: COM. 323. Offered 2. A continuation of COM. 323.

COM. 426.—Advanced Television Production and Programming. 5 credits. Prerequisite: COM. 325.

Applied program production and direction in all basic formats; deals with the skills, duties, and the responsibilities necessary for the qualified producer-director. Includes the study of artwork and set design, program policy, fare, and criticism.

COM. 430.—Individual Problems. 3 hours. 3 credits. Prerequisite: At least 15 hours of communications in the Upper Division and consent of the instructor. Offered 1, 2.

COM. 460.—Communications Seminar. 2 hours. 2 credits. Offered 1, 2.

Study and discussion of the principles and practices of planning, preparing, and producing radio and television programs.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

COM. 502.—Radio-TV Advertising. 5 hours lecture-laboratory. 3 credits. Prerequisite: COM. 201 or permission of instructor. Offered 2.

Procedure and practice of radio and television advertising and their emerging techniques. Study of radio and television as advertising media. Writing of commercial copy, testing of copy, and radio-TV programming for advertising sales.

COM. 506.—Radio-TV Reporting. 5 hours lecture-laboratory. 3 credits. Prerequisite: 8 hours of professional writing courses. Offered 1.

The techniques of preparing and editing the news and other similar material for radio and TV broadcast.

GRADUATE COURSES

Prerequisites: An approved undergraduate major of twenty-four semester hours, or its equivalent, in communications, is required for enrollment in graduate courses and for registration for the degree of Master of Arts with a major in communications.

Not more than two of the 500-numbered courses may, with approval of the School's Graduate Committee, be taken for major graduate credit.

COM. 601.—Radio-TV Audience Research I. 3 hours. 3 credits. Offered 1.

Intensive study into listenership in these two media. Would include case studies of listenership and content analysis; sampling problems, questionnaire techniques, and data collection.

COM. 602.—Radio-TV Audience Research II. 3 hours. 3 credits. Offered 2. (The second half of the course COM. 601-602.)

COM. 603.—Analysis and Development of Radio-TV Program Resources. 3 hours. 3 credits. Offered 1, 2.

Study of the performance and ethics of radio and television in terms of content, government and industry controls, economic bases, and psychological and social effects.

COM. 605.—Mass Communications and Society I. (Identical with JM. 605) 3 hours. 3 credits. Offered 1.

Rights and responsibilities of the communicator. Propaganda and public opinion. Interaction of mass media and society. Government, politics, and mass communications. Relationship and competition among mass media.

COM. 606.—Mass Communications and Society II (Identical with JM. 606). 3 hours. 3 credits. Offered 2.

(The second half of the course COM. 605-606.)

COM. 611.—History of Communications (Identical with JM 611). 3 hours. 3 credits. Offered 1.

Reading, critical study, and advanced investigative report on an approved research subject selected from such areas as: the development of concepts and principles in communications; biograhpies of great editors and commentators; regional and state journalism; evolution of communication agencies.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

COM. 614.—Problems in Public Relations (Identical with JM. 614). 3 hours. 3 credits. Offered 2.

Advanced professional instruction and training in the field of public relations. Project method of research.

COM. 628.—Problems and Policies of Educational Radio-TV. 3 hours. 3 credits. Offered 1, 2.

Study of the provisions for educational radio and television programs, with the possibilities and needs for serving adults, in-school pupils, pre-school pupils and organized groups.

COM. 630.—Individual Work. 3 hours. 3 credits. Offered 1, 2.

A reading or research course in such areas of Communications as are needed by graduate students. May be elected for full credit in subsequent sessions with change of content.

COM. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2.

COMMUNITY PLANNING

Instructional Staff 1956-57

Torraca, P. M., Acting Head; Arnett, W. T., Patterson, T. W.,** Sebold, H. R.

CPG. 301-302-303.—Special Studies in Planning. 3 hours conference, 30 hours studio work. 3 credits each unit. Prerequisite: Recommendation of Advisor for Community Planning. The courses in these series may not be taken for credit by students majoring in Architecture, Building Construction, Interior Design, or Landscape Architecture. Offered 1, 2, 3.

Special studies in planning adjusted to the needs of seniors and graduate students whose lack of foundation in physical design indicates a need for such studies before pursuing more advanced work.

CPG. 501-502-503-504-505.—Projects in Planning. 1 hour conference, 35 hours research and studio work. 3 credits each; group total, 15 credits. Prerequisite: Permission of the faculty. Corequisite: A program of electives in related fields approved by the faculty. Offered 1, 2.

Basic concepts, problems, and practices of community planning. Research into the inter-related social, economic, and physical problems of towns and cities, metropolitan areas, and regions; the preparation and analysis of tentative plan solutions.

CPG. 601-602-603-604.—Community Planning. 1 hour conference, 35 hours research and studio work. 3 credits each; group total, 12 credits. Prerequisites: Completion of appropriate fifth year work in Community Planning and permission of the faculty. Corequisites: A program of electives in related fields approved by the faculty. Offered 1, 2.

The analysis of comprehensive planning problems of moderate complexity, involving both new and existing communities, with proposals for the design and implementation of solutions.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

**On leave 1956-57

CPG. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

For students working for the master's degree.

DAIRY SCIENCE

Instructional Staff 1956-57

Fouts, E. L., Head; Arnold, P. T. D., Becker, R. B., Krienke, W. A., Marshall, S. P., Mull, L. E., Wilkowske, H. H., Wing, J. M.

DY. 211.—Introduction to Dairy Science. 2 hours, and 2 hours laboratory. 3 credits. Offered 1, 2.

Development of dairy science; breeding, selection, feeding and management of dairy cattle; sanitary milk production; composition, properties, processing and analyzing dairy products.

DY. 310.—Dairy Products Processing. 2 hours, and 6 hours laboratory. 4 credits. Prerequisite: DY 211. Offered 2.

Commercial methods of handling and processing various dairy products.

DY. 312.—Technical Control of Dairy Products. 1 hour and 4 hours laboratory. 3 credits. Prerequisite: DY. 211. Offered 2.

Technical and laboratory control of dairy plant operations and dairy products.

DY. 318.—Grading and Judging Dairy Products. 1 hour, and 2 hours laboratory. 2 credits. Corequisite: DY 211. Offered 1.

Market grades and classes of dairy products; grading and judging; chemical and bacteriological defects and methods of prevention.

DY. 408.—Dairy Industry Review. 1 hour. 1 credit. Prerequisite: DY. 211. Offered 1.

Recent developments in the dairy industry.

DY. 410.—Dairy Cattle Judging and Breeds. 4 hours laboratory. 2 credits. Prerequisite: DY. 211. Offered 1.

Characteristics of dairy breeds. Scoring, comparative judging, classification judging, and fitting animals for sale and show.

DY. 411.—Dairy Cattle Management. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite: DY. 211. Offered 1.

Dairy breeds, selection, breeding and raising dairy cattle. Several trips to dairy farms.

DY. 412.—Milk Production. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite: DY. 211. Offered 2.

Feeding and management of dairy cattle for milk production. Several trips are made to dairy farms.

DY. 416.—Dairy Technology. 3 hours. 3 credits. Prerequisite: DY. 312. Offered 2.

Constituents of milk and how affected by thermal, ionic and physical treatments of various dairy products and methods of evaluating these effects.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

DY. 420.—Problems in Dairy Technology. 2 hours, and 3 hours laboratory. 3 credits. Prerequisite: Permission of instructor. Offered 1, 2, 3.

Qualified students may choose any approved problem covering some phase of dairy technology.

DY. 421.—Seminar. 1 hour. 1 credit. Prerequisite: DY. 211. Offered 2.

Preparation and presentation of papers on current topics in the student's major field. Course is designed for seniors in Dairy Husbandry and Dairy Manufactures.

DY. 422.—Milk Secretion. 2 hours. 2 credits. Prerequisites: DY. 211, AL. 312. Offered 2.

Anatomy of the mammary gland; physiology of milk secretion; factors affecting milk yield and composition; practical aspects of udder care and management.

DY. 423.—Applied Dairy Microbiology. 2 hours, and 3 hours laboratory. 3 credits. Prerequisites: DY. 211, BCY. 305, BCY. 307. Offered 1.

Commercial application of dairy microbiology with respect to dairy farm and dairy plant operation, inspection, sanitation, regulations and standards, clean milk production, fermented milks, dairy culture propagation and microorganisms common in dairy products.

DY. 424.—Advanced Dairy Breeds. 2 hours, and 2 hours laboratory. 3 credits. Offered 1.

Advanced study of breed backgrounds, developments and programs for improved breeding.

GRADUATE COURSES

DY. 608.—Methods in Animal Research. 2 hours. 2 credits. Offered 1.

Methods employed in nutritional investigations with farm animals, including feeding and management.

DY. 622.—Advanced Dairy Cattle Breeding. 3 hours, 3 hours laboratory. 4 credits. Offered 2.

Origin and development of dairy cattle breeds. Application of genetics to dairy cattle breeding.

DY. 623.—Problems in Dairy Production. Variable credit. Offered 1, 2, 3.

Special topics for majors in Dairy Husbandry.

DY. 625.—Advanced Dairy Technology. 2 hours, and 6 hours laboratory. 4 credits. Offered 1.

Advanced methods of chemical control of dairy products.

DY. 626.—Advanced Dairy Products Processing. 2 hours, and 6 hours laboratory. 4 credits. Offered 2.

Advanced methods of processing dairy products.

DY. 627.—Advanced Dairy Microbiology. 2 hours, and 6 hours laboratory. 4 credits. Offered 3.

Advanced methods of microbiological control of dairy products.

DY. 699.—Research and Master's Thesis. 0 to 6 credits.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ECONOMICS

Instructional Staff 1956-57

Donovan, C. H., Head; Anderson, M. D., Blodgett, R. H., Bradbury, R. W., Feuerlein, W. J., Fristoe, C. W., Hodgson, J. L., Jackson, E. L., Karp, J. R., Koefod, P. E., Lassiter, R. L., Matthews, C. A., Mercer, N. A., Qualls, L. L., Shields, M. W., Siemieniewski, A., Sievers, A. M., Smith, C. D., Sterba, R. A. L., Tuttle, F. W., Webb, J. N.

Economic Theory (See other groupings for additional ES. courses.)

ES. 200
ES. 201
ES. 202
ES. 208
ES. 210
ES. 246
ES. 404
ES. 407
ES. 408
ES. 409
ES. 410
ES. 411
ES. 468
ES. 485
ES. 602
ES. 605
ES. 606
ES. 608
ES. 609
ES. 610
ES. 611
ES. 632
ES. 637
ES. 685
ES. 691
ES. 692

Banking Finance

ES. 321
*BS. 322
*BS. 324
*BS. 327
*BS. 420
ES. 421
*BS. 422
*BS. 424
*BS. 427
*BS. 428
ES. 429
ES. 441
ES. 449
ES. 477
ES. 478
*BS. 621
ES. 622
*BS. 624
*BS. 627
*BS. 628
*BS. 629
ES. 677
ES. 678
ES. 679

Marketing

*BS. 231
*BS. 233
*BS. 334
*BS. 336
ES. 347
*BS. 430
*BS. 433
*BS. 434
*BS. 437
*BS. 438
*BS. 439
*BS. 448
*BS. 450
*BS. 459
*BS. 474
*BS. 611
*BS. 634
*BS. 635
*BS. 637

Foreign Trade Geography

ES. 296
ES. 347
ES. 382
ES. 441
*BS. 448
ES. 449
ES. 483
ES. 643
ES. 645
****GPY. 481
****GPY. 485
****GPY. 486
****GPY. 586
****GPY. 587
****GPY. 588
****GPY. 589
****GPY. 689

Insurance

*BS. 260
*BS. 363
*BS. 365
*BS. 366
*BS. 462
*BS. 463
*BS. 481
*BS. 482
*BS. 484
*BS. 486
*BS. 487
*BS. 662
*BS. 666
*BS. 667
*BS. 668

Business Law

*BS. 401
*BS. 402
*BS. 403
*BS. 484
***RE. 493
*BS. 601

Labor

ES. 372
*BS. 373
*BS. 472
ES. 475
ES. 476
ES. 672
*BS. 673
ES. 674
*BS. 677

Management

*BS. 101
*BS. 271
*BS. 373
*BS. 375
*BS. 464
*BS. 471
*BS. 473
*BS. 474
*BS. 475
*BS. 479
*BS. 675
*BS. 676
*BS. 677

Business Statistics

ES. 203
ES. 366
ES. 369
*BS. 464
ES. 469
ES. 669
ES. 670
ES. 671

Transportation and Public Utilities

ES. 351
*BS. 444
*BS. 451
*BS. 452
ES. 453
ES. 454
*BS. 457
ES. 458
ES. 483
ES. 650
ES. 651
ES. 656

See Also
Accounting**
Real Estate***

*Course descriptions are given under Business Organizations and Operation.
**Course descriptions are given under Accounting.
***Course descriptions are given under Real Estate.
****Course descriptions are given under Geography.

A departmental major in Economics in the College of Arts and Sciences must include ES. 201 and ES. 202, ES. 321, and ES. 327, and from 12 to 21 elective hours in ES. courses approved by the Departmental Advisor.

Courses numbered 300 and higher are open only to students with junior standing. Note, however, specific prerequisites for certain courses.

ES. 200.—Introduction to Economic Problems. 3 hours. 3 credits. Not offered 1957-58.

A course especially designed for teachers of high school social studies, or as an introduction to the study of current economic problems. It is a concise summary of some of the most important topics that confront American citizens in a democracy. The contents should enable students better to understand and to appraise our economic system. Not open to students who have had ES. 201-202 and cannot be used for credit in the College of Business Administration.

ES. 201.—Basic Economics. 3 hours. 3 credits. Offered 1, 2, 3.

After a preliminary discussion of the nature of economics and economic concepts and institutions, this half of the course, ES. 201-202, emphasizes the accounting, analytical, and policy aspects of national income and product, along with such closely related topics as governmental finance, money and banking, and international trade and finance.

ES. 202.—Basic Economics. 3 hours. 3 credits. Offered 1, 2, 3.

This half of the course in Basic Economics, ES. 201-202, deals primarily with the theories of production, determination of prices and distribution of income in both regulated and unregulated industries. Some attention is also given to the problems of industrial relations, monopolies, and to comparative economic systems.

ES. 203.—Elementary Statistics. 3 hours, and 2 hours laboratory. 4 credits. Prerequisite: C-42 or equivalent. Offered 1, 2, 3.

The statistical method as a tool for examining and interpreting data; acquaintance with such fundamental techniques as find application in business, economics, biology, agriculture, psychology, sociology, etc.; basic preparation for more extensive work in the field of statistics. Several exercises in the laboratory involve the use of machine tabulation from data which have been transcribed on tabulation cards.

ES. 208.—Economic History of the United States. 3 hours. 3 credits. Offered 1, 2, 3.

The industrial development of America; the exploitation of natural resources; the history of manufacturing, banking, trade, transportation, etc.; the evolution of industrial centers; the historical factors contributing to the growth of the United States.

ES. 210.—Machine Technology in American Life. 3 hours. 3 credits. Offered 2.

Shift from agrarian to industrial economy; development of machine technology and mass production; finance capitalism; impact of technological change on cultural pattern; class stratification and conflicts; relation of technology to nationalism and internationalism.

ES. 246.—Consumer Economics. 3 hours. 3 credits. Offered 1, 2.

A study of consumer buying practices, management of personal and family finances, spending the income wisely, consideration of buying guides and consumer protection agencies.

ES. 296.—Industry and Trade of Latin America. 3 hours. 3 credits. Offered 1.

The industrial importance of the several Latin American countries viewed in the light of their economic background. Attention is devoted to the development of the industries of each country, the volume and types of exports and imports as well as the trade practices and customs of these countries.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ES. 321.—Money and Banking. 3 hours. 3 credits. Prerequisite: ES. 201. Offered 1, 2, 3.

A study of money systems and standards; of the factors determining the size of the money supply with special emphasis on the role of commercial and central banks and government fiscal policy; and of the relationship between money, prices, production and employment.

ES. 327.—Public Finance. 3 hours. 3 credits. Prerequisite: ES. 201. Offered 1, 2, 3.

Principles governing expenditures of modern government; sources of revenue; public credit; principles and methods of taxation and financial administration as revealed in the fiscal systems of leading countries.

ES. 347.—Principles of Foreign Trade. 3 hours. 3 credits. Prerequisite: ES. 201. Offered 1, 2, 3.

Fundamental principles of foreign trade; significance of geographic, economic, social, and political influences; current practices and development in foreign trade; products of international commerce, protective tariffs and other barriers to world trade; tendencies in the foreign trade of the United States.

ES. 351.—Elements of Transportation. 3 hours. 3 credits. Prerequisite: ES. 202. Offered 1, 2, 3.

General survey of the significance, characteristics, and major problems of intercity transportation.

ES. 366.—Economic Statistics. 3 hours. 3 credits. Prerequisite: ES. 203. Offered 1.

Designed primarly for undergraduate majors in economics who have had a one-semester course in descriptive statistics. Emphasis is on correlation analysis and time series analysis in the field of economics. Although the stress is on meaning and interpretation of the summarizing techniques, some attention is given to computation, including electronic computing equipment.

ES. 369.—Sample Surveys: Principles and Applications. 3 hours. 3 credits. Prerequisite: ES. 203. Offered 2.

The principles and applications of statistical sampling in business, industry and government; the advantages of large, small, random, and stratified samples; sampling procedures, tests, and designs in current use; sample surveys in operation, administration and costs.

ES. 372.—Labor Problems. 3 hours. 3 credits. Prerequisite: ES. 202. Offered 1, 2, 3.

Labor problems: insecurity, wages and income, hours, sub-standard workers, industrial conflict; attempts to solve labor problems by employees; unionism in its structural and functional aspects; attempts to solve labor problems by employers: personnel management, employee representation, employers' associations; attempts to solve labor problems by state: protective labor legislation, laws relating to settlement of industrial disputes.

ES. 382.—Principles of Resource Utilization (Identical with GPY. 382). 3 hours. 3 credits. Offered 2, 3.

A comprehensive review of the natural and human resources of the United States followed by an intensive study of the wise and wasteful practices of exploitation and utilization of these resources. A study of the human and economic significance of the principles of conservation with special reference to the South. Course designated to satisfy resource certification for social studies teachers.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ES. 404.—Government Control of Business. 3 hours. 3 credits. Prerequisites: ES. 201-202. Offered 1.

The evolution of economic control; an examination of the effectiveness of *laissez faire* control in the American economy; legality of and chief methods of effectuating governmental control; the development of the relationship between government and non-public utility monopolies; Federal Trade Commission control of competitive practices; a critical appraisal of recent developments in the field of government control.

ES. 407.—Economic Principles and Problems. 3 hours. 3 credits. Prerequisites: ES. 201-202. Offered 1, 2, 3.

An advanced course in economic theory, dealing especially with the theories of production, price determination, and income distribution and their application to a selected list of current economic problems.

ES. 408.—Economic Principles and Problems. 3 hours. 3 credits. The second half of the course ES. 407-408. Offered 1, 2, 3.

ES. 409.—Comparative Economic Systems. 3 hours. 3 credits. Offered 1, 2, 3.

The economics of capitalism, socialism, communism, and fascism. The theoretical economics of capitalism, socialism, and communism, and the actual economics of the United States, Soviet Russia, England, Nazi Germany, and Fascist Italy are compared on the basis of such matters as industrial production, agriculture, exchange, credit and banking, income distribution, the status of labor, and international trade. Marxian Socialism is also considered briefly.

ES. 410.—Development of Modern Western Economy. 3 hours. 3 credits. Offered 1.

An analytical study of the economic development of Western Europe and of the United States from the Commercial Revolution to the decline of British dominance in the world economy.

ES. 411.—Development of Modern Western Economy. 3 hours. 3 credits. Offered 2.

A continuation of ES. 410. From the incipent stage of U. S. leadership in the world economy to the present.

ES. 421.—Advanced Money and Banking. 3 hours. 3 credits. Prerequisite: ES. 321. Offered 1.

A continuation of ES. 321, concerned with a critical study of the relationships between the Federal Reserve system, the money market, government finance, business fluctuations, and the internal and external value of money in the United States.

ES. 429.—Introduction to Business Cycles. 3 hours. 3 credits. Prerequisite ES. 321. Offered 1, 2, 3.

An introduction to the principal theories of the business cycle including also a description of the various types of cycles and an examination of the important remedies that have been proposed.

ES. 441.—Financial Institutions and Fiscal Policies of Selected Latin-American Countries. 3 hours. 3 credits. Offered 2.

The courses will include a study of the public finances and the money and banking of each of the following countries: Mexico, Cuba, Colombia, Peru, Argentina, Bolivia, and Brazil.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ES. 449.—International Finance: Foreign Exchange. 3 hours. 3 credits. Prerequisite: ES. 321. Offered 2.

A study of the theoretical and practical aspects of foreign exchange.

ES. 453.—Transport Regulation. 3 hours. 3 credits. Prerequisite: ES. 351. Offered 2.

Analysis of the development and major problems of transport regulation.

ES. 454.—Principles of Public Utility Economics. 3 hours. 3 credits. Prerequisite: ES. 201-202. Offered 1.

The nature, place and development of public service corporations; types of public control; valuation and rate making; regulation of service, accounts, reports, and securities; combinations; public relations; public ownership.

ES. 458.—Highway Transportation. 3 hours. 3 credits. Offered 1.

Principles and problems of highway transportation, covering its development and economic impact; the physical facilities of carriage, including highways and their financing, vehicles and terminals; organizational structure and cost characteristics; service characteristics; organization and management of the firm; rates and rate making; significant external relations of operators with shippers, with the public through social control, and with other firms and carriers.

ES. 468.—Economic History in the Making. 3 hours. 3 credits. Offered 2.

The era of industrialism; contemporary economic organization; types of economic reform; special consideration of current social and economic problems in England, France, Germany, Soviet Russia, and the United States.

ES. 469.—Business Cycles and Forecasting. 3 hours. 3 credits. Prerequisite: ES. 203. Offered 2.

Mathematical and statistical theory of the relationships of important variables in the business cycle, such as profits, the price level, wages, national income, employment, savings and investment. Application of this theory to business forecasting and problems of governmental control.

ES. 475.—Wage Theory and Practice. 3 hours. 3 credits. Offered 2.

A study of the theoretical aspects of wages and wage determination and their relationship to production, distribution, and employment.

ES. 476.—Government in Relation to Labor. 3 hours. 3 credits. Offered 1.

Factors influencing government's approach to labor problems; labor legislation; wages and hours laws; accident and safety problems; child labor control; government and collective bargaining; political actions of unions.

ES. 477.—Problems in Federal Finance. 3 hours. 3 credits. Prerequisite: ES. 327. Offered 1.

Economic effects of public expenditure; war finance; personal income and estate taxes; corporate income and profits taxes; excise taxes; debt problems.

ES. 478.—Problems in State and Local Finance. 3 hours. 3 credits. Prerequisite: ES. 327. Offered 2.

Allocation of functional responsibility; property taxation; sales taxes; highway finance, business taxation; supervision of local finance. Emphasis on Florida problems.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ES. 483.—Geography of Transportation. 3 hours. 3 credits. Offered 2.

Patterns of world transportation by regions, routes and terminals—land, water, and air. Natural and cultural reasons for their development. Areas of traffic origination and termination; amounts and types of traffic carried. Economic and political significance of routes and commodity movements. Emphasis on U. S. national and international transportation routes and traffic with particular reference to Florida.

ES. 485.—International Economic Relations. 3 hours. 3 credits. Offered 1.

The development of international economic policies; geographic, economic, social, and political factors underlying contemporary international problems; economic and political methods employed by the leading commercial nations to expand their economic interests.

ES. 591.—Masterpieces in the Social Sciences. 3 hours. 3 credits. Prerequisite: Senior standing. Identical with HY. 591, PCL. 591 and SY. 591. Offered 1.

A reading course for advanced undergraduate students. Enrollment limited to students having the approval of their advisor in the major field and the course chairman. Selected works of representative authors who have contributed most to the fields of economics, history, sociology, political science, geography and anthropology will be read and evaluated.

ES. 592.—Masterpiece in the Social Sciences. 3 hours. 3 credits. Prerequisite: Senior standing. The second half of the course ES. 591-592. Identical with HY. 592, PCL. 592 and SY. 592. Offered 2.

GRADUATE COURSES

Though no graduate major may be completed without adequate course work on the 600 or higher level, certain undergraduate courses in economics are available for graduate credit as a part of a candidate's major. These are: ES 404—Government Control of Business; ES. 421—Advanced Money and Banking; ES. 429—Introduction to Business Cycles; ES. 441—Financial Institutions and Fiscal Policies of Selected Latin-American Countries; ES. 449—International Finance: Foreign Exchange; ES. 453—Transport Regulations; ES. 454—Principles of Public Utility Economics; ES. 458—Highway Transportation; ES. 469—Business Cycles and Forecasting; ES. 475—Wage Theory and Practice; ES. 476—Government in Relation to Labor; ES. 477—Problems in Federal Finance; ES. 478—Problems in State and Local Finance; and ES. 485—International Economic Relations.

ES. 602.—Comparative Economic Systems. 3 hours. 3 credits. Offered 2.

A critical analysis of the economic theories, problems, policies, and accomplishments of capitalism, socialism, the Soviet Russian economy, the British economy under partial socialism, and the fascist economies of Germany and Italy.

ES. 605.—The Development of Economic Thought. 3 hours. 3 credits. Prerequisites: ES. 407-408 or equivalent. Offered 1.

Development of economic thought; analysis of theories of various schools of economic thought; a study of the Physiocrats, Mercantilism, the Classical Economics; the leading economists of the Austrian School, and a brief survey of the Beginning of Socialism; the development of theoretical background for research and graduate work of an advanced nature.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session

ES. 606.—The Development of Economic Thought. 3 hours. 3 credits. The second half of the course ES. 605-606. Prerequisite: ES. 605. Offered 2.

Analysis of the thought of the followers and defenders on the one hand and of the abler critics on the other hand of the Classical Economists; appraisal of recent contributions of the various schools in formulating a system of economic analysis.

ES. 608.—Present-day Schools of Economic Thought, Part I. 3 hours. 3 credits. Offered 1.

The purpose of this course is to examine the main currents of contemporary American and English economic thinking with particular reference to the developments occurring between the two World Wars. The writings of Hansen, Mitchell, Clark, and Commons, in the United States, and of Keynes, Cole, Robinson, and Hobson in England will be examined.

ES. 609.—Present-day Schools of Economic Thought, Part II. 3 hours. 3 credits. Offered 2.

Continuation of the study initiated in Part I.

ES. 610.—The Development of the American Economy to 1860. 3 hours. 3 credits. Offered 1, 3.

A functional approach to the study of the economic development of the United States. World Economic conditions that led to the settlement of America; the colonial period; the period of economic transition; the westward movement and the rise of a national economy; and economic causes of the Civil War.

ES. 611.—The Development of the American Economy—1860. 3 hours. 3 credits. Offered 2.

The development of the westward movement and the closing of the economic frontier. The development of a capitalistic economy and the trend toward economic and financial imperialism. Economic problems of the wars of 1914-18 and 1939-45, and postwar economic adjustments, domestic and foreign.

ES. 622.—Money, Prices, and Business Cycles. 3 hours. 3 credits. Prerequisite: ES. 321. Offered 1.

An analytical survey of the economic instabilities in capitalistic society, with emphasis upon forces operating to bring about changes in the general level of prices, including prices of productive agents, employment, and income.

ES. 632.—Location of Economic Activity. 3 hours. 3 credits. Offered 1.

Conventional economic theory is extended by considering space as an explicit variable. This theory is applied to two problems: (1) the principles governing the location of agricultural and manufacturing industries; (2) the problem of the optimum spatial distribution of social production. Case studies in industrial location and problem areas in regional and national development will receive careful attention. Special emphasis will be placed upon empirical research techniques.

ES. 637.—Imperfect Competition. 3 hours. 3 credits. Not offered 1957-58.

A comprehensive review of recent attempts to reconstruct economic theory in terms of "imperfect" or "monopolistic" competition.

ES. 643.—Theory of International Trade. 3 hours. 3 credits. Offered 1.

The historical and economic background of foreign trade; the theory of international trade; the fundamentals of international exchange; international commercial policies and international trade; exchange fluctuations and their control; the international monetary institutions.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ES. 645.—The Economy of Latin America. 3 hours. 3 credits. Offered 2.

A study of contemporary economic and commercial problems of Latin America. Attention will be given to current developments in production, transportation and trade of the various countries.

ES. 650.—Policies of Federal Transportation Commissions. 3 hours. 3 credits. Offered 2.

Critical consideration of the policies of the Interstate Commerce Commission and the Civil Aeronautics Board.

ES. 651.—Transportation Policy. 3 hours. 3 credits. Offered 1.

Critical examination of the development, effects, and proposed improvements of general transportation policy, including regulation, promotion, taxation, and labor.

ES. 656.—Problems in Public Utilities. 3 hours. 3 credits. Prerequisite: ES. 454. Not offered 1957-58.

An intensive study of problems in the field of public utility industries, including types and techniques of public control, the problems of public utility rates, regulation of public service industries, public ownerships, and public power projects.

ES. 669.—Problems in Statistics and Business Forecasting. 3 hours. 3 credits. Offered 1.

A critical study of special problems in statistics and business forecasting .

ES. 670.—Mathematical Economics—Part I. 3 hours. 3 credits. Not offered 1957-58.

This course is a mathematical treatment of the theory of static equilibrium in economics. It is based upon the works of Walras, Pareto, Schultz, Hicks, and others.

ES. 671.—Mathematical Economics—Part II. 3 hours. 3 credits. Not offered 1957-58.

Continuation of the study initiated in Part I.

ES. 672.—Organized Labor in the United States. 3 hours. 3 credits. Offered 1.

A study of the problems connected with the relationship of organized labor with itself, management, government, and the public—labor policy and public welfare.

ES. 674.—Labor Economics. 3 hours. 3 credits. Offered 2, 3.

The seminar in wage theory has for its purpose an intensive and advanced study of the various theories of wage determination and the economic role of wages in the economy.

ES. 677.—Governmental Debt. 3 hours. 3 credits. Not offered 1957-58.

Influences and mechanisms for debt incurrence and retirement by federal, state, and local governments. Problems of debt use and abuse, regulations, area planning, and intergovernmental relations. Emphasizes case studies.

ES. 678.—Governmental Finance Administration. 3 hours. 3 credits. Not offered 1956-1957.

Governmental finance critically examined according to administrative processes within and among governments; compares operating behavior of governments in managing revenue, expenditure, debt, budgets, records, and reports; appraises methods by policies implicit in administration.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ES. 679.—Fiscal Policy. 3 hours. 3 credits. Offered 1.

Fiscal policy in relation to other means of control; opposing viewpoints as to proper scope of fiscal policy; the case for deficit spending; tax policy and economic stability; debt management; budgetary theory and practice.

ES. 685.—International Economic Relations. 3 hours. 3 credits. Offered 2.

An historical study of the development of international economic policies; geographic, economic, social, and political factors underlying contemporary international problems; economic and political methods employed by the leading commercial nations to expand their economic interests.

ES. 691.—Neo-Classical Economics. 3 hours. 3 credits. Offered 1, 3.

Analysis, criticism, and restatement of neo-classical price and production theories. Demand, supply, cost of production, and price determination under various conditions of the market will be considered. The writings of Marshall, Hicks, Boulding, Davenport, Stigler, Fellner, J. Robinson, and Chamberlain provide the background for the discussion.

ES. 692.—Neo-Classical Economics. 3 hours. 3 credits. The second half of the course ES. 691-692. Offered 2.

Analysis, criticism, and restatement of neo-classical theories concerning the distribution of income. Rent, interest, wages, profits, personal distribution, supplementary distribution, and noncapitalistic distribution will be considered. The writings of Marshall, Hicks, Cassel, Boulding, Pigou, Fisher, Douglas, Knight, Stigler, and Schumpeter provide the background for the discussion.

ES. 699.—Research and Master's Thesis. Variable registration. 0 to 6 credits. Offered 1, 2, 3.

Directed research and writing for the M.A. degree, taken toward the end of the students graduate program for credit in addition to the 24 hours required for the master's degree.

ES. 799.—Research and Doctoral Dissertation. Variable registration. 1 to 12 credits. Offered 1, 2, 3.

Directed research and writing for the Ph.D degree, taken toward the end of the student's graduate program for credit in addition to the hours of regular courses required by the candidate's supervisory committee for the doctor's degree.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EDUCATION

GENERAL AND CROSS-DEPARTMENTAL COURSES

Instructional Staff 1956-57

Wiles, K., Head; Ahrens, M. R., Bachman, Harold B., Bingham, N. E., Combs, A. W., Cumbee, C. F., Cunningham, M. T., Curran, R. L., Durrance, C. L., Eggert, C. L., Green, E. K., Haines, A. C., Henderson, L. N., Hilliard, P., Johns, R. L., Laird, D. S., Myers, R. B., Nutter, H., Paul, O. F., Schmidt, D. T., Spache, G. D., White, J. B., Winsor, D. L., Wirtala, A. E.

Cross-Departmental Courses for Special Areas

College Teaching	Supervision
ED. 640	ED. 631
ED. 641	ED. 632
ED. 642	ED. 633
ED. 740	ED. 634
ED. 741	ED. 730
ED. 742	ED. 731
ED. 743	

ED. 418.—Audio-Visual Materials of Instruction. 2 hours. 3 credits. Offered 3.

A general course for teachers at all grade levels. Presents sources and methods of using audio-visual materials of instruction.

ED. 482.—Planning for Improved Daily Living. 4 hours. 3 credits. Offered 3.

Study of the techniques of using Florida resources in the areas of arts and crafts, architecture, housing, interior decorating, and landscaping. Attention is given to developing understandings and appreciations of the fine arts, costume designing, and health practices.

ED. 500.—Student Teaching, I. 6 or more hours. 3 credits. Prerequisite: approval of department head. Offered 1, 2.

Supervised observation, participation, and teaching under the guidance of a selected classroom teacher.

ED. 501.—Student Teaching, II. 6 or more hours. 3 credits. The second half of the course ED. 500. Prerequisite: approval of department head. Offered 1, 2.

GRADUATE COURSES

ED. 630.—Individual Work. 3 credits. Offered 1, 2, 3.

For advanced students who wish to study individual problems under faculty guidance. Before registering in this course, a student must have a written statement of the proposed project approved by the project supervisor, the head of the department in which the research will be done, and the Assistant Dean for Instruction of the College of Education. Forms for this purpose are available in YON 132.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ED. 631.—Educational Leadership, I. 3 hours. 3 credits. Offered 1, 3.

This is a basic leadership course recommended for majors in administration and supervision. Emphasis is given to the development, initiation, and implementation of programs and policies; to goal determination; and to human relationships. Research projects will center around leadership problems of administrators and supervisors.

ED. 632.—Educational Leadership, II. 3 hours. 3 credits. A continuation of ED. 631. Prerequisite: ED. 631 or ED. 634. Offered 2, 3.

ED. 633.—Methods and Problems of Supervision. 3 hours. 3 credits. Prerequisite: ED. 631 or ED. 634. Offered 2, 3.

Critical study of methods of evaluating and improving instruction.

ED. 634.—Group Process in Education. 3 hours. 3 credits. Offered 2.

Opportunity is provided to gain experience in group organization, planning and evaluation, and to develop skills in group leadership and participation, recording, observing, role playing, and interpretation of group interaction. Special attention is given to group work in the classroom and staff meetings. Open to in-service teachers, administrators, and community leaders.

ED. 640.—College Curriculum and Teaching. 3 hours. 3 credits. Offered 1, 3.

Development, functions, and problems of colleges in the American society. Emphasis on curriculum, learning process and teaching procedures, instructional aids, and evaluation.

ED. 641.—Practicum in College Teaching, I. 3 hours. 3 credits. Offered 1.

Study of the problems of college teaching. Provision is made for the student to teach under the supervision of a professor in his academic field.

ED. 642.—Practicum in College Teaching, II. 3 hours. 3 credits. A continuation of ED. 641. Offered 2.

ED. 650.—Problems in Classroom Teaching. 3 credits. Open only to classroom teachers for graduate on-the-job training.

Teachers will attend planned conferences during the first and second semesters in addition to engaging in a continuous work program under the direction of the coordinator of the conference. Teachers may register for this course three years and earn a maximum of nine credits.

ED. 651.—Audio-Visual Education. 3 hours. 3 credits. Offered 1, 2, 3.

The selection, evaluation and use of audio-visual materials, with emphasis upon projected still and sound motion pictures.

ED. 652.—Production and Utilization of Audio-Visual Materials. 1 hour and 4 hours laboratory. 3 credits. Prerequisite: ED. 651 or consent of instructor. Offered 3.

Designed to train materials supervisors, audio-visual coordinators, and other school personnel in the production of materials by photographic processes, and in the operation of materials centers.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ED. 653.—Organization and Operation of a Materials-of-Instruction Program. 3 hours. 3 credits. Prerequisite: ED. 418 or ED. 651. Offered 1, 3.

The administration of a school or county materials-of-instruction program, including arrangement of materials and equipment, organization and operation, financial report, standards, physical plant functions and evaluation.

ED. 655.—Mental Health in the Classroom. 3 hours. 3 credits. Offered 1, 3.

Designed to assist teachers, principals, and supervisors in developing sound principles for creating a healthful classroom environment. Open to professional workers on both elementary and secondary levels.

ED. 657.—Florida Workshop: Bulletin Series Division. 6 hours. 6 credits.

This course provides organization, materials, and assistance for a group of principals and teachers engaged in the preparation of bulletins for professional and lay groups for use in the Florida Program for the Improvement of Instruction. Membership is limitetd to a selected group.

ED. 658.—Florida Workshop: Bulletin Series Division. 6 hours. 6 credits. A continuation of ED. 657.

ED. 659.—Laboratory in Corrective Reading. 6 hours. 6 credits. Prerequisite or corequisite: EDE. 675. Offered 2, 3.

Intensive study of the diagnosis, correction, and prevention of reading difficulties, in both elementary and secondary schools; work with children in the application of principles under study.

ED. 661.—Problems in Reading. 3 hours. 3 credits. Prerequisite: EDE. 675, ED. 659, or equivalent. Offered 2.

Specific reading problems such as those encountered in the classroom situation will be selected for exhaustive study by individuals or small groups; the teaching of reading on any grade level.

ED. 662.—The Community School. 3 hours. 3 credits.

To help the student acquire an understanding of the philosophy and purpose of the community school, a knowledge of the best community school practice, and to plan for developing a community school.

ED. 663.—Music in the Elementary School. 2 credits. Offered 2.

An in-service training course open to elementary school teachers. The purpose is to give graduate in-service training to persons actually engaged in music teaching. Those who register in this course will attend planned conferences during the year and will be required to engage in research work under the supervision of the Head of the Department of Music for the entire year.

ED. 664.—Vocal Music in the Secondary School. 2 credits. Offered 2.

An in-service training course open only to vocal music teachers. The purpose is to give graduate in-service training to persons actually engaged in vocal music teaching. Those who register in this course will attend planned conferences during the year and will be required to engage in research work under the supervision of the Head of the Department of Music for the entire year.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ED. 665.—Orchestra Music in the Public Schools. 2 credits. Offered 2.

An in-service training course open only to instrumental music teachers. The purpose is to give graduate in-service training to persons actually engaged in instrumental music teaching. Those who register in this course will attend planned conferences during the year and will be required to engage in research work under the supervision of the Head of the Department of Music for the entire year.

ED. 666.—Band Music in the Public Schools. 2 credits. Offered 2.

An in-service training course open only to instrumental music teachers. The purpose is to give graduate in-service training to persons actually engaged in instrumental music teaching. Those who register in this course will attend planned conferences during the year and will be required to engage in research work under the supervision of the Head of the Department of Music for the entire year.

ED. 670.—Workshop in Human Relations in Education. 3 hours. 3 credits. Offered 3.

An opportunity for teachers, administrators, parents, and community workers to explore current principles and practices in the field of human relations and their implications for interpersonal and intergroup problems in the family, school, and community.

ED. 682.—Field Laboratory for Faculty Study of Special Problems. 3 or 6 credits. Offered 1, 2.

To assist teachers in single schools, groups of schools, or county systems in improving certain subject areas or in working on special problems within the system. The area, the field, or the problem proposed for study must be submitted for approval.

ED. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

ED. 730.—Practicum in Supervision. 15 credits. Prerequisites: Ed. 631, 633. Offered 1, 2.

An internship in supervision characterized by study-work-study phases. Students will be assigned to appropriate supervisory units in terms of their vocational goals for practical experiences, but will return to the College of Education at regular intervals for seminars. The practical experiences will be supervised by instructors from the College of Education.

ED. 731.—Work of the Director of Curriculum. 3 hours. 3 credits. Admission by permission of the instructor. Offered 1.

The duties of the director of curriculum are examined from the standpoint of their administrative, coordinative, supervisory, and research aspects.

ED. 740.—Programs of Teacher Education. 3 hours. 3 credits. Offered 1.

An analysis of the organization and problems of teacher education institutions; types of students, patterns of curricula, functions of staff, significant organizations and agencies, and special studies.

ED. 741.—Internship in Teacher Education, I. 3 hours. 3 credits. Offered 1, 2.

Study of the problems of pre-service teacher education and participation in the planning and teaching of pre-service course.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ED. 742.—Internship in Teacher Education, II. 3 hours. 3 credits. A continuation of ED. 741. Offered 1, 2.

ED. 743.—Seminar: General Education for Colleges. 3 hours. 3 credits. Offered 2.

Investigation of the: forces contributing to the general education movement; the characteristics and needs of the college student; objectives of general education; types of courses and programs, content of courses, and similar related problems.

ED. 750.—Seminar: Education for Today. 3 hours. 3 credits. Offered 2.

An analysis of the operation of education in present-day society and the relationships among the various phases of education from early childhood through adulthood. Designed to assit the doctoral candidate to determine the place of his specialization in the educational program.

ED. 760.—Science Education in American Schools. 3 hours. 3 credits. Prerequisite: EDE. 660 or EDS. 660, or equivalent.

An investigation of research findings regarding modern science and its place in the elementary, secondary, and general education programs.

ED. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2, 3.

EDUCATION—ADMINISTRATION

Instructional Staff 1956-57

Johns, R. L., Head; Eggert, C. L., Henderson, L. N., Leps, J. M., Simmons, G. B.,

See also ED. 631-632, Educational Leadership, which may be classified as Educational Administration for the purpose of certification, or for a major.

EDA. 501.—The Teacher's Role in the Administrative Process. 3 hours. 3 credits. Offered 2.

For seniors and graduates who do not expect to take graduate majors in school administration. Cannot be counted for credit by a major in school administration. An analysis of the administrative duties of the classroom teacher and his relationships to the various administrative and supervisory officers of the school system.

GRADUATE COURSES

EDA. 600.—Educational Organization and Administration. 3 hours. 3 credits. Offered 1, 3.

The basic course in school administration. It includes the following areas: federal, state and local relationships and functions; systems of educational organization in the United States; duties of superintendents, board members, principals and trustees; the organization of local school units, and the interrelationships of teacher, administrator, and supervisors.

EDA. 601.—Organization and Administration of Elementary Schools. 3 hours. 3 credits. Offered 1, 3.

The organization and administration of elementary schools are studied in the light of purposes and functions. Special emphasis is given to the skills and competencies desirable for leadership at a school center.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EDA. 602.—Organization and Administration of Secondary Schools. 3 hours. 3 credits. Offered 1, 2, 3.

The varied duties and responsibilities of the school principal are comprehensively studied. Competencies necessary for leadership in organizing, administering, supervising, and evaluating the secondary school center are investigated.

EDA. 603.—Public School Business Administration and Finance. 3 hours. 3 credits. Offered 2, 3.

Included in the scope of this course are the following areas: state, local, and federal financing of education; school financial records and reports; the preparation and administration of budgets; purchasing procedures; the issuance and sale of school securities.

EDA. 604.—Legal Phases of Public School Administration. 3 hours. 3 credits. Offered 2, 3.

The legal status of the schools in the United States will be studied. Special emphasis will be given to Florida conditions, school laws, constitutional provisions, judicial decisions, Attorney General's rulings, and regulations of the State Board of Education.

EDA. 605.—Florida Workshop: Principals' Division. 6 hours. 6 credits.

Open to a limited number of secondary school principals upon application to the Dean of the College of Education. This course is designed to acquaint principals with current principles and objectives of education and curriculum program basic to an improved program.

EDA. 606.—Supervised Practice in School Administration. 3 hours. 3 credits.

Only advanced graduate students are permitted to enroll for the course. Students are given opportunity to perform administrative duties under supervision.

EDA. 607.—Administration of Teacher Personnel. 3 hours. 3 credits. Offered 2, 3.

Consideration will be given such problems as human factors in school administration; teacher morale; selection, placement, and evaluation of teachers; legal aspects of personnel administration; salary schedule construction; teacher participation in formulating administrative policies; teacher welfare; teacher absences, and the substitute teacher; teacher load and class size; and techniques for improving the teaching personnel in service.

EDA. 608.—Administration of Pupil Personnel. 3 hours. 3 credits. Offered 1.

This course deals with techniques of child accounting and of providing pupil personnel services. Attention will be given to such problems as the school census, child labor laws, compulsory education laws, attendance problems, causes for non-attendance, the visiting teacher, pupil records — current and cumulative, teacher reports to principals on pupil personnel, reporting pupil progress to parents, age-grade studies, school marks, school adjustments to meet individual needs, classification and promotion of pupils.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EDA. 609.—Problems in School Administration and Supervision. 3 credits. Offered 1, 2, 3.

An in-service training course open only to supervisors and school administrators for the purpose of giving graduate on-the-job training. Work conferences are called periodically during the year for the purpose of conducting research on specific problems in administration and supervision. Those who register in this course are expected to spend nine days in residence on the University campus for each three hours of credit. Students may register for this course more than once but the maximum credit varies from nine to twelve credits, according to the recommendations of the counselor.

EDA. 630.—Individual Work. 3 credits. Offered 1, 2, 3.

This course is provided for advanced students who wish to undertake an individual research project which is directly related to Administration and Supervision. Before registering in this course, students must have a written statement of the proposed project approved by the project supervisor, the Head of the Department of Administration and the Assistant Dean for Instruction of the College of Education.

EDA. 700.—School Survey, I. 3 hours. 3 credits. Offered 1.

Study is made of school survey techniques and their application. Long term planning of educational programs is emphasized. Field experience in school surveys will be made available to students taking the course.

EDA. 701.—School Survey, II. 3 hours. 3 credits. Offered 2.

This is a continuation of EDA. 700.

EDA. 702.—The School Plant. 3 hours. 3 credits. Offered 2, 3.

Planning of building programs and the planning of school buildings in relation to instructional needs are studied. Special attention is given to the maintenance, operation, and utilization of school plants.

EDA. 703.—School Transportation. 3 hours. 3 credits. Offered 3.

A study is made of the organization and administration of transportation services for school children. Consideration is given to the routing of school buses, transportation safety standards, and the organization and administration of publicly owned systems of transportation.

EDA. 704.—College Administration. 3 hours. 3 credits. Offered 2, 3.

Educational policies, functions, and practices in the administration of higher institutions.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EDUCATION — ELEMENTARY

Instructional Staff 1956-57

Ahrens, M. R., Carey, J., Cody, M. B., Cooper, J., Drayton, S., Green, E. K., Haimbach, D., Haines, A. C., Hilliard, F. P., Liggett, H. R., McCracken, J. M., McEachern, F. M., Mitchell, J. O., Murray, L. L., Powers, S. R., Schraemeyer, C. Tison, J. P.

See also General Science, School Art, and Social Studies.

EDE. 300.—Children and Learning. 10 hours seminars, 15 hours laboratory. 15 credits. Open to the second semester junior and to the senior in Elementary Education upon approval of the student's faculty counselor. Offered 1, 2.

Conducted with a staff and coordinator, this course provides the student with study and laboratory experiences. The relationship of human growth and of theories of learning to the elementary program are considered. Seminars are supplemented by planned experiences in the P. K. Yonge Laboratory School and other public schools for students to use their knowledge and skills for working with children. No other courses should be scheduled with EDE. 300.

EDE. 400.—Problems of Instruction. 3 hours. 3 credits. Prerequisite: Permission of instructor. Offered 1, 3.

The course in elementary curriculum required for certification to teach in grades 1-12 in certain specialized fields. Must be taken concurrently with a designated section of EDS. 300 during the fall semester.

EDE. 405.—The Practicum. 5 hours and 30 hours laboratory. 15 credits. Prerequisite: Approval of the Elementary Staff. Offered 1, 2.

Internship in selected classrooms of public schools; special seminars and continuous evaluation of teaching experiences. No other courses may be taken during the internship semester. Students will be expected to live in the community in which they do their internship. Prerequisite EDE 300, or consent of Elementary Department.

EDE. 500.—Seminar in Elementary Education, I. 3 hours. 3 credits.

Open to pre-service teachers who have completed an internship and in-service teachers who are completing an undergraduate degree. Under staff guidance, the mature student has opportunity to: review the role of the elementary school in society and his role as teacher; review the ethical and professional implications of this role; examine his educational philosophy in terms of the above roles and current trends in elementary education; study intensively individual problems encountered during internship or teaching.

EDE. 550.—The Teaching of Arithmetic. 3 hours. 3 credits. Offered 2, 3.

The purposes of the course are to help teachers of both the elementary school and the junior high school (1) to gain an understanding of arithmetic concepts, symbolism and procedures, (2) to gain an insight into the findings of research relative to the most effective methods and materials for making arithmetic meaningful, and (3) to gain a perspective of the total arithmetic program throughout grades kindergarten to eight in relation to the total school program. The emphasis will be shifted to meet the needs of the class members.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EDE. 560.—Teaching Science in the Elementary Schools. 3 hours. 3 credits. Offered 2.

Emphasis is placed upon the development of science content and methods and upon the trying out of these ideas and methods in the student's classroom.

EDE. 570.—Teaching of Reading. 3 hours. 3 credits. Offered 1, 3.

A comprehensive survey of the problems of teaching reading in all grades and practical procedures for attacking these problems.

GRADUATE COURSES

EDE. 600.—Elementary School Curriculum. 3 hours. 3 credits. Offered 1, 3.

A survey of the content and methods of the elementary school curriculum. Offered primarily for students who have not taken a course in elementary curriculum and who have not had teaching experience in the elementary schools; also, the first course in elementary curriculum for students majoring in administration.

EDE. 601.—Practices in Elementary Education, I. 3 hours. 3 credits. Offered 1, 2, 3.

A study of practices in the elementary school in relation to fundamental principles of curriculum development. Emphasis is placed upon selection, organization, and development of effective teaching-learning situations. This is the basic elementary curriculum course for Master's programs in Elementary Education.

EDE. 602.—Practices in Elementary Education, II. 3 hours. 3 credits. Offered 3.

Emphasis is placed upon an interdisciplinary approach to problems in social learnings of elementary children.

EDE. 603.—Early Childhood Education, I. 3 hours. 3 credits. Offered 1, 3.

Study of the curriculum for nursery school and kindergarten. The course includes such topics as: what young children are like; curriculum experiences to meet the needs of young children; reports and records; working with parents. Helps meet certification in Early Childhood Education.

EDE. 604.—Early Childhood Education, II. 3 credits. Offered 2, 3.

Practicum in the nursery school and kindergarten. Helps meet certification in Early Childhood Education.

EDE. 605.—Teaching in Small Schools. 3 hours. 3 credits.

To assist teachers, principals and supervisors of small schools where there are special problems in class organization, curriculum and community relationships.

EDE. 635.—Supervision of Pre-Service Teachers, I. 3 hours. 3 credits. Open to graduate students with certification and background in elementary education or permission of instructor. Offered 3.

Problems and issues of pre-service teacher education, with particular emphasis on procedures of supervising interns. Includes an analysis of the functions of cooperating classroom teachers, special service personnel, supervisors and administrators who are concerned with the intern program.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EDE. 636.—Supervision of Pre-Service Teachers, II. 3 hours. 3 credits. Prerequisite: EDE. 635.

A continuation of EDE. 635.

EDE. 660.—Science Education in the Elementary School. 3 hours. 3 credits. Prerequisite: GL. 301 or equivalent, or permission of instructor. Offered 1, 3.

Current problems in teaching science in elementary schools, new materials and techniques of teaching, recent developments in the sciences and their implications.

EDE. 670.—Language Arts in the Elementary School — Skills. 3 hours. 3 credits. Offered 2, 3.

A study of current practices and trends in teaching reading, listening, and oral and written expression.

EDE. 671.—Language Arts in the Elementary School — Creative Expression. 3 hours. 3 credits. Offered 1, 3.

Emphasis is placed on a study of literature for children and the arts related to it. These arts include plastic art, dramatization, storytelling, choral speaking, and creative writing.

EDE. 675.—Trends in the Teaching of Reading. 3 hours. 3 credits. Offered 1, 3.

Analysis of trends in the teaching of reading as shown in current methods and research. Includes consideration of purposes and aims, skills and attitudes, informal and formal reading tests.

EDE. 700.—Problems in Elementary Education, I. 3 hours. 3 credits. Offered 3.

Advanced course in elementary school curriculum.

EDE. 701.—Problems in Elementary Education, II. 3 hours. 3 credits.

Second half of EDE. 700.

EDE. 702.—Evaluation in the Elementary School. 3 hours. 3 credits. Offered 3.

Emphasis will be placed upon point of view and methods and techniques used in appraising the behavioral growth of pupils. Consideration will also be given to evaluation of the objectives of the total elementary school program.

EDE. 703.—Seminar in Elementary Education, II. 3 hours or 6 hours. 3 or 6 credits. Open to advanced graduate students only upon consent of the staff in Elementary Education. Offered 1, 2.

Opportunity (a) to make a critical examination of current research, (b) to cooperate with advanced students in other fields of education to provide an overview of the total program in education, and (c) to work cooperatively on special projects. Staff course.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EDUCATION — FOUNDATIONS

Instructional Staff 1956-57

Hines, V. A., Head; Baker, M. C., Combs, A. W., Cumbee, C. F., Curran, R. L., Gordon, I. J., Gray, L. A., Laird, D. S., Lewis, Hal G., McLendon, I. R., Muntyan, B., Newman, F. W., Potter, R. E., Scates, D. E., Spears, W. D., Watkins, L. E.

EDF. 225.—Children and Culture. 3 hours. 3 credits. Offered 1, 2, 3.

A study of education as a function of the social setting. Materials from the social sciences are selected which reveal the educative effects of our social structures, the social values and issues involved in appraising these effects, and the resulting social demands which influence the responsibilities and problems of the school.

EDF. 245.—Human Growth and Development. 4 hours. 3 credits. Offered 1, 2.

A first course in professional education designed to acquaint students with a basic understanding of the nature and dynamics of human behavior. Particular attention will be given to the effects of physical growth, the family, peer relationships, and the school on the development of adequate personalities. Experiences will include observation of children in the P. K. Yonge Laboratory School.

EDF. 300.—History of Education in the United States. 3 hours. 3 credits. Offered 1, 3.

The historical development of our schools is traced with the implications of this development for the role of today's schools in its broad economic, sociological and psychological significance.

EDF. 360.—Elementary Statistical Methods in Education. 3 hours lecture; 2 hours laboratory optional. 3 credits. Offered 1, 2, 3.

Application of selected techniques of organization and interpretation of educational data.

EDF. 410.—Philosophy of Education. 3 hours. 3 credits. Offered 2, 3.

A critical examination is made of various theories and philosophies of education, their relationships to the democratic principle, and their significance to the evolving system of education in the United States.

EDF. 440.—Child Development. 3 hours. 3 credits. Offered 1, 3.

Designed to acquaint the student with the growth and development of children into mature personalities. The findings of recent research will be studied through outside reading, class discussion and observation. Methods of evaluating child growth will be considered.

EDF. 442.—Educational Psychology. 3 hours. 3 credits. Offered 2, 3.

An understanding of the applications of psychological principles to the educational process. It treats such topics as individual differences, principles of learning, transfer of training, and the nature of reasoning.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EDF. 450.—Measurement and Evaluation in Education. 3 hours. 3 credits. Offered 1, 2, 3.

Study is made of the basic principles and methods of measurement and evaluation of pupil learning in schools.

EDF. 544.—Laboratory in Child Study, I. 3 credits. Offered 1, 2.

This is an in-the-field laboratory course in child study open only to teachers working with children at the time of enrollment in the course. It is designed to assist the teacher (1) to get a better understanding of the factors which influence the behavior of children, and (2) to acquire specific techniques for the study and analysis of individual behavior.

EDF. 545.—Laboratory in Child Study, II. 3 credits. Prerequisite: EDF. 544. Offered 1, 2.

A continuation of EDF. 544.

GRADUATE COURSES

EDF. 600.—History of Education. 3 hours. 3 credits. Offered 1, 2, 3.

Appreciation of current progress and diagnosis of current problems depend upon knowing how progress was achieved and problems developed. Although education is examined from primitive beginnings to the present, greatest attention is given to ideas of educational theorists and to the growth of American education.

EDF. 610.—Democracy and Education. 3 hours. 3 credits. Offered 1, 2, 3.

A study of the reciprocal relationships of democracy and education.

EDF. 611.—Theories of Mind. 3 hours. 3 credits. Offered 2.

This course covers conceptions of mind and thinking processes with implications for curriculum organization and classroom practice.

EDF. 620.—Socio-Economic Foundation of Education. 3 hours. 3 credits. Offered 1, 2, 3.

The socio-economic bases for education are comprehensively surveyed.

EDF. 640.—Problems in Pupil Development and Learning. 6 hours. 6 credits. Offered 3.

Study is made of problems of particular interest to students in the field of pupil growth and learning.

EDF 641.—Educational Psychology — Personality Dynamics. 3 hours. 3 credits. Offered 1, 2, 3.

An examination of the dynamics of behavior and its implications for education, counseling and guidance, administration, family relationships, and social action.

EDF. 642.—Educational Psychology — Problems. 3 hours. 3 credits. Offered 1, 2, 3.

Individualized study is made of problems dealing with child development, adolescence, learning, and other areas of educational psychology.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EDF. 643.—Educational Psychology — Learning Theory. 3 hours. 3 credits. Offered 1, 3.

Different theories of learning will be studied and evaluated. The student will be expected to make a synthesis of the implications of these theories.

EDF. 650.—Measurement and Evaluation. 3 hours. 3 credits. Prerequisites: PSY. 211 or EDF. 360 and EDF. 450 or EDP. 613. Offered 2, 3.

Students will be guided in the investigation of problems involving measurement, evaluation of school procedure and diagnostic and remedial practices. Problems directly related to the needs of students enrolled will be studied. Test construction will be emphasized.

EDF. 660.—Educational Statistics. 3 hours. 3 credits. Prerequisite: EDF. 360 or an equivalent course or the approval of the instructor. Offered 2, 3.

Statistical methods as applied to educational data and problems are systematically studied.

EDF. 710.—Education and Moral and Spiritual Ideas. 3 hours. 3 credits. Offered 2.

A consideration of types of moral ideas, of the relation of moral values to school subjects, and of the question of direction and systematic moral and spiritual instruction in the schools.

EDF. 712. Contemporary Educational Theories. 3 hours. 3 credits. Offered 1, 3.

A seminar for post-master's students. A critical study of contemporary philosophical theories of education.

EDF. 720.—School and Society. 3 hours. 3 credits. Offered 1, 3.

Provides a social and philosophic frame of reference through a rigorous study of the society in which education takes place and the implication of this society for the functioning of the school. Conducted on a seminar basis. Limited to students in the sixth year program of teacher education and candidates for the doctor's degree in education.

EDF. 730.—World Trends in Education. 3 hours. 3 credits. Offered 1, 3.

A study of the role of education in promoting contemporary national and international goals.

EDF. 760.—Techniques of Research. 3 hours. 3 credits. Offered 1, 3.

This is a required course for all students working for the ED.D. degree. Training is given in identifying research problems, selecting and organizing useful means for research, methods of gathering data, procedures for analyzing and treating data, and best practices for interpreting and reporting observed phenomena.

EDF. 780.—Seminar in Educational Foundations. 3 hours. 3 credits. Offered 1, 2.

A seminar for advanced students and staff to consider questions and problems in education foundations. The problems studied will vary from semester to semester as attention is given to historical, philosophical, social, psychological, aesthetic foundations of education and comparative education.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EDUCATION — PERSONNEL SERVICES

Instructional Staff 1956-57

Stripling, R. O., Head; Barrett, A. M., Bristol, L. R., Combs, A. W., Cunningham, M. A., Fordyce, J. W., Foster, C. R., Laird, D. S., Lane, D., McCutchen, K. A., Soper, D. W., Spache, G. D., Thomason, O. B.

EDP. 300.—Principles and Practices for Teaching Exceptional Children. (Formerly ED. 300). 3 hours. 3 credits. Prerequisite: EDF. 245 or equivalent. Offered 1.

Consideration is given to exceptional children as commonly found in our public schools. All students, particularly teachers, will find answers to incidence, causes, diagnosis, agencies for referral, and recommended teaching procedures in respect to the blind, partially-seeing, deaf, hard-of-hearing, speech defective, crippled, mentally retarded, mentally superior, and socially and emotionally disturbed.

EDP. 500.—Materials and Methods for Teaching Slow Learners. (Formerly ED. 500). 3 hours. 3 credits. Prerequisites: EDP. 300 or PSY. 312. Offered 2, 3.

Programs will be constructed which will correlate skill subjects with the cores of interest. Curricular materials will be considered which can be used to teach children who are mentally handicapped, at various maturation levels and in various situations. Classroom teachers would find this course helpful.

EDP. 503.—Methods of Teaching Crippled Children. (Formerly ED. 503). 3 hours. 3 credits. Prerequisites: EDP. 300 or PSY. 312. Offered 3.

An analysis is made of academic difficulties and needs due to specific handicaps. Consideration is given to maintaining a normal school program for each child.

EDP. 504.—Therapeutic Care of Crippled Children. (Formerly ED. 504). 3 hours. 3 credits. Prerequisites: EDP. 300 or PSY. 312. Offered 3.

Attention is given to the interpretation of medical and psychological reports. Rehabilitation through physical education, physical therapy, and occupational therapy is considered. Vocational guidance is an important phase of the course.

EDP. 506.—(Identical with SCH. 623).—Methods in Teaching the Deaf and Hard-of-Hearing. (Formerly ED. 506). 3 hours. 3 credits. Offered 3.

Designed to prepare the teacher of the deaf and hard-of-hearing. Methods and materials used for individual and group instructions of children and adults who have impaired hearing.

GRADUATE COURSES

EDP. 600.—Teaching Exceptional Children. (Formerly ED. 600). 3 hours. 3 credits. Prerequisite: EDP. 300 or PSY. 312. Offered 2, 3.

An advanced course in the care, treatment, and education of children with problems and handicaps.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EDP. 601.—Administration and Supervision of Programs for Exceptional Children. (Formerly ED. 601). 3 hours. 3 credits. Prerequisite: EDP. 300 or PSY. 312. Offered 3.

The principles of administering and supervising programs for the mentally and physically handicapped and for the mentally superior are considered. Attention is given to public school, private school, institutional, city, county, and state programs for exceptional children.

EDP. 610.—Principles of Guidance. (Formerly ED. 610). 3 hours. 3 credits. Corequisite or prerequisite: EDF. 641. Offered 1, 2, 3.

An introduction to the field of student personnel work.

EDP. 611.—Occupational Information. (Formerly ED. 611). 3 hours. 3 credits. Offered 2, 3.

Method of studying occupations; sources of information concerning employment conditions, job requirements, training facilities, occupational trends; evaluation of occupational literature; use of occupational information in counseling.

EDP. 612.—Techniques of Guidance. (Formerly ED. 612). 3 hours. 3 credits. Corequisite or prerequisite: EDP. 610, EDF. 641, EDF. 450 or equivalent, or approval of instructor. Offered 1, 2, 3.

A survey of the various techniques used by teachers and guidance specialists, with special reference to tests, records, and counseling.

EDP. 613.—Personnel Testing. (Formerly ED. 613). 3 hours. 3 credits. Prerequisite: EDF. 360 or EDF. 450, or permission of instructor. Offered 1, 3.

A study of typical aptitude tests and inventories used in personnel work, with assigned readings in test literature. Procedures for standardizing and validating tests will be considered, with emphasis on the evaluation of the various instruments for use in personnel work.

EDP. 614.—Case Studies in Counseling. (Formerly ED. 614). 3 hours. 3 credits. Prerequisites: EDF. 641, EDP. 610, and EDF. 450 or equivalent. Offered 2, 3.

Competency is developed in the appraisal of diagnostic data obtained from case histories and in the application of counseling theory and techniques. Actual case records will be prepared, studied, and discussed in class.

EDP. 616.—Practicum in Counseling. (Formerly ED. 616). 3 hours. 3 credits. Advanced written application for admission to the course is required. Must be taken concurrently with EDP. 617. Offered 1, 2, 3.

Experience in individual counseling will be provided under supervision.

EDP. 617.—Practicum in Counseling. (Formerly ED. 617). 3 hours. 3 credits. Must be taken concurrently with EDP. 616. Offered 1, 2, 3.

EDP. 618.—The Organization and Administration of Guidance Programs. (Formerly ED. 618). 3 hours. 3 credits. Prerequisites: EDP. 610, EDF. 641, EDF. 450.

Methods of organizing and administering personnel programs in educational institutions.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EDP. 656.—Problems of Visiting Teacher Service. (Formerly ED. 656). 3 hours. 3 credits.

Problems of (1) reporting, study, diagnosis and treatment of typical attendance and other problem cases; (2) relationships with the home, school and community; (3) the legal and child labor aspects of attendance.

EDP. 710.—Theories of Counseling. (Formerly ED. 710). 3 hours. 3 credits. Prerequisite: EDP. 614 or equivalent. Offered 2.

A consideration of theories of counseling with implications for counseling practice.

EDP. 715.—Seminar in Personnel Work. 3 hours. 3 credits.

Admission limited to advanced students working either for the degree of Specialist in Education, or Doctor of Education. Admission by consent of instructor. The seminar will provide an opportunity for members of the staff to work with advanced students in the field of guidance and personnel work, in the study and consideration of research papers, trends in theory and practice, and problems incident to the field.

EDP. 716.—Internship in Personnel Work, I. (Formerly ED. 716). 3 credits. Offered 1, 2.

Opportunity will be provided to selected students for supervised field work. Advanced written application for admission to the course is required.

EDP. 717.—Internship in Personnel Work, II. (Formerly ED. 717). 3 credits.

A continuation of EDP. 716.

EDUCATION — SECONDARY

Instructional Staff 1956-57

Henderson, L. N., Head; Bingham, N. E., Boyne, E. M., Browne, E. B., Cay, D. F., Durrance, C. L., Kidd, K. P., Lounsbury, J. H., MacCurdy, R. D., McGuire, V., Myers, R. B., Olson, C. M. (On leave), Whetstone, R. W.

EDS. 305.—The Secondary School Today. 3 hours. 3 credits. Offered 1, 2, 3.

Purposes and organization of the secondary school, curriculum, teacher's role, adolescent behavior and application of learning theory, guidance, classroom management, student activities, evaluating and reporting student progress, educational issues, and similar topics will be examined to help the student acquire certain basic competencies for teaching. At least two extra hours per week during the regular school day must be arranged by the student for observation, participation, and other approved activities.

EDS. 405.—Intern Teaching in the Secondary School. Daily. 15 credits. Consult department head for prerequisites. Offered 1, 2.

Full-time off-campus student teaching in selected schools and seminars for the study of curriculum and method. Assignment of the intern to the teaching center is made by the Department of Secondary Education. This course is accepted by the State Department of Education as fulfilling the certification requirements in special methods, practical experience, and one-half of the requirement in secondary school curriculum.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EDS. 550.—The Teaching of Mathematics in the Junior High School. 3 hours. 3 credits. Prerequisite or corequisite: EDE. 550 or permission of instructor. Offered 2, 3.

This course deals with (1) present-day problems of mathematics curriculum in the junior high school, (2) representative materials of instruction, (3) research findings relative to most effective ways of directing and learning of mathematics, and (4) the nature of and ways of teaching intuitive geometry, beginning algebra, scale drawing, graphic methods, measurement, and computation with approximate data. Laboratory experiences will be provided.

EDS. 560.—Teaching Science in the Secondary School. 3 hours. 3 credits. Offered 1, 3.

Content, methods, materials and approaches to use in teaching science in the secondary school.

GRADUATE COURSES

EDS. 600.—Foundations of Secondary School Curriculum. 3 hours. 3 credits. Offered 1, 2, 3.

A synthesis of the research having implications for the secondary school and an analysis of the assumptions underlying the past and present day secondary school curricula.

EDS. 601.—The Junior High School Curriculum. 3 hours. 3 credits. Prerequisite: EDS. 600 or permission of instructor. Offered 3.

An analysis of the scope and function of the modern junior high school. Emphasis will be placed on developing a school program to meet the needs of early adolescents.

EDS. 602.—The Secondary School Curriculum. 3 hours. 3 credits. Prerequisite. EDS. 600 or permission of instructor. Offered 1, 3.

An analysis of the scope, functions, and types of secondary school curricula. Consideration will be given to criteria for judging the secondary school curriculum and ways of improving existing programs.

EDS. 603.—Community College Education. 3 hours. 3 credits. Offered 3.

An analysis of the program and problems of the community college.

EDS. 604.—Curriculum Development Laboratory. 6-12 hours laboratory. 3 credits. Prerequisite: EDS. 600. Offered 2.

Guided experiences in developing resource units for teaching and the writing of courses of study.

EDS. 605.—Evaluation in the Secondary School Program. 3 hours. 3 credits.

A study of procedures and of techniques of evaluation in secondary schools.

EDS. 610.—Secondary Curriculum Workshop. 6 hours. 6 credits.

A workshop designed to assist secondary school teachers and administrators in planning programs for curriculum improvement.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EDS. 611.—The Core Program in the Secondary School. 3 hours. 3 credits. Offered 1, 3.

A study of the organization, the methods, and the materials used in core classes.

EDS. 635.—Supervision of Pre-Service Teachers, I. 3 hours. 3 credits. Offered 1, 2, 3.

A study of the function of the directing teacher in the internship program and the problems and procedures of supervising the work of interns.

EDS. 636.—Supervision of Pre-Service Teachers, II. 3 hours. 3 credits. Prerequisite: EDS. 635.

A continuation of EDS. 635.

EDS. 640.—Social Studies in the Secondary School. 3 hours. 3 credits. Offered 2, 3.

Consideration of the problems of teachers, supervisors, and principals in teaching social studies in grades seven through fourteen. Trends, basic principles, recent improvements in methods and materials will be emphasized. Each student will be given opportunity to develop understandings and skills in a special problem in the social studies.

EDS. 641.—Economic Education in the Secondary School. 3 credits. Offered 3.

A workshop designed (1) to increase understanding of our national economy by a study of fundamental principles and concepts, (2) to make plans for more and better teaching of economic understandings in the elementary and high schools.

EDS. 650.—Mathematics in the Secondary School. 3 credits. Offered 3.

Selection and use of resource materials in junior and senior high school mathematics; current problems in the teaching of mathematics; laboratory experiences in surveying, preparation of displays, construction of equipment, and examination of films and other types of materials.

EDS. 660.—Science in the Secondary School. 3 hours. 3 credits. Offered 2, 3.

Current problems in teaching science in secondary schools and junior colleges. New materials and techniques of teaching and recent developments in the sciences and their implications.

EDS. 670.—Language Arts in the Secondary School. 3 hours. 3 credits. Offered 1, 3.

Gives opportunity to principals, supervisors, graduate students, and in-service teachers to work on their own problems at the various levels in grades seven through fourteen. Present trends, basic principles, methods, and materials will be considered.

EDS. 690.—Student Activities in the Secondary School. 3 hours. 3 credits. Offered 3.

An exploration of the purposes, phases, and operations of student activities. Designed to assist student activity directors, activity sponsors, and principals in improving the activities program in their school.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EDS. 700.—Seminar in Secondary Education. 3 hours. 3 credits. Offered 1.

An analysis of the issues and research in the field of secondary education.

EDS. 701.—Participation in Curriculum Development Program. 3 hours. 3 credits. Offered 1, 2.

Participation in field work in curriculum development and a study of methods and procedures of curriculum changes.

EDS. 705.—Adult Education in the Community College (Junior College). 3 hours. 3 credits.

An examination into the various types of community college programs in adult education. Methods of community survey and ways of identifying and defining educational needs of adults will be considered.

EDUCATION — VOCATIONAL AGRICULTURE

Instructional Staff 1956-57

Garris, E. W., Head; Lofton, W. T.

EDV. 303.—Methods in Vocational Agriculture. 3 hours. 3 credits. Offered 2.

General methods of teaching vocational agriculture are studied.

EDV. 306.—Vocational Education. 3 hours. 3 credits. Offered 1, 3.

The development, function, and scope of vocational agriculture, home economics, grade and industrial education, and business education as provided for by the National Vocational Education Acts of Congress.

EDV. 409.—Supervised Teaching in Vocational Agriculture. 9 hours laboratory. 3 credits. Prerequisites: EDF. 245; EDS. 305; EDV. 303, 306. Offered 1.

Practical experience is offered in teaching young farmer and adult farmer classes in vocational agriculture. Under supervision, student teachers will assist in organizing and instructing adult classes.

EDV. 410.—Supervised Teaching in Vocational Agriculture. 9 hours laboratory. 3 credits. Prerequisites: EDF. 245; EDS. 305; EDV. 303, 306. Offered 2.

Teaching experience will involve vocational agriculture in high school classes.

EDV. 411.—Adult Methods in Vocational Agriculture. 2 hours. 2 credits. Prerequisites: EDF. 245; EDS. 305; EDV. 303, 306. Offered 1.

Problems of course organization, methods of teaching, and supervised farming for young farmers and adult farmers are considered.

EDV. 412.—Course Organization in Vocational Agriculture. 2 hours. 2 credits. Prerequisites: EDF. 245; EDS. 305; EDV. 303, 306.

Special procedures in organizing the course of study, and in teaching regular day classes of vocational agriculture in the high school are studied. Attention is also given to methods of directing Future Farmer activities.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

GRADUATE COURSES

EDV. 611.—History and Development of Agricultural Education. 3 hours. 3 credits. Offered 1.

History of agricultural education will be traced from its beginning in other countries to the present program in the United States.

EDV. 612.—Philosophy and Administration of Vocational Education. 3 hours. 3 credits. Offered 2.

Basic principles for administering a program of vocational education on a national, state and local level will be considered.

EDV. 665.—Problems in Agricultural Education. 3 hours. 3 credits.

For students who are qualified to select and pursue advanced research problems.

EDV. 666.—Problems in Agricultural Education. 3 hours. 3 credits.

The second half of the course EDV. 665-666.

EDV. 667.—Supervised Farming Problems in Agricultural Education. 3 hours. 3 credits.

The course will cover the essential problems in planning and supervising programs of farming as required in the text of the Smith-Hughes and George-Barden Acts. Each student will select an approved problem.

EDV. 668.—Buildings, Equipment and Supplies for Vocational Education. 3 hours. 3 credits.

Basic requirements for building, equipment, and supplies will be considered in this course. Whenever possible, a student will consider the physical facilities needed for his particular community.

EDV. 671.—Adult Education in Agriculture. 3 hours. 3 credits.

Adult education in agriculture will form the core of this course. The problems will involve the organization of classes, procedures in teaching, and evaluation.

EDV. 672.—Preparing Course Materials and Community Programs in Agriculture. 3 hours. 3 credits.

Basic principles will be considered in preparing a course of study in vocational agriculture. Consideration will also be given to the preparation of community agricultural programs. Special attention will be given to each student in planning a course of study, and a program for his particular locality.

EDV. 673.—The Supervision of Vocational Education. 3 hours. 3 credits.

Designed to acquaint the student with the various national, state, and local supervisory problems.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ELECTRICAL ENGINEERING

Instructional Staff 1956-57

Larsen, M. J., Head; Bailey, T. L., Chen, W. H., Cooper, N. D., Cramer, W. H., Eadie, D., Elgerd, O. I., Fagen, W. F., George, T. S., Johnson, W. E., Kessler, W. J., Latour, M. H., Lear, W. E., Muschlitz, E. E., Perdue, G. F., Peterson, W. W., Priem, E. S., Pumphrey, F. H., Rosier, N. E., Sampson, R. W., Sashoff, S. P., Schoonmaker, L. E., Schrader, G. F., Smith, E. F., Sullivan, A. W., Wiggins, M. J., Wing, A. H., Wood, W. L., Zetrouer, W. F.

EL. 211.—Introduction to Electrical Engineering. 3 hours. 3 credits. Corequisites: PS. 206, MS. 354. Offered 1, 2, 3.

Basic knowledge of fundamentals of electric, magnetic, and dielectric circuits.

EL. 341.—Elements of Electrical Engineering. 3 hours. 3 credits. Prerequisites: MS. 354, PS. 206. Offered 1, 2.

For engineering students not majoring in electrical subjects. Electric and magnetic circuits; electrostatics; electromagnetics; d-c machinery; representation of alternating currents by vectors and complex quantities; measurement of power in single phase and polyphase circuits; generation; transmission; utilization of electrical energy; characteristics of a-c machinery; selection; testing; installation of electrical equipment; and elementary electronics.

EL. 342.—Elements of Electrical Engineering. 3 hours. 3 credits. The second half of the course EL. 341-342. Offered 1, 2, 3.

EL. 343.—Elements of Electrical Engineering. 3 hours. 3 credits. Prerequisites: MS. 354, PS. 206. Offered 1, 2.

For students majoring in Civil Engineering. The course covers as much of the field of Electrical Engineering as possible within the allotted time, including electric and magnetic circuits, theory and application of direct and alternating current machines, illumination, and elementary electronics.

EL. 345.—Electrical Illumination. 2 hours and 3 hours laboratory. 3 credits. Prerequisite: Approval by instructor. Offered 2.

Illumination, light sources, light control, application, circuits and wiring, control equipment, floodlighting.

EL. 346.—Elementary Electronics. 3 hours and 3 hours laboratory. 4 credits. Prerequisite: EL. 361. Offered 2, 3.

Basic principles of electron tubes and electron tube circuits, vacuum tubes as circuit elements, amplifiers. Classroom and laboratory examples taken from the fields of telephone and radio communications, and electronic instrumentation.

EL. 349.—Electrical Laboratory. 3 hours laboratory. 1 credit. Corequisite: EL. 341. Offered 1, 2.

A laboratory course for engineering students not majoring in electrical subjects. Experimental studies and tests of direct, alternating, and electronic circuits and apparatus.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EL. 350.—Electrical Laboratory. 3 hours laboratory. 1 credit. The second half of the course EL. 349-350. Corequisite: EL. 342. Offered 1, 2, 3.

EL. 361.—Electric Circuits. 3 hours and 3 hours laboratory. 4 credits. Prerequisites: MS. 354, PS. 206, EL. 211. Offered 1, 2.

Generation of alternating voltage and current; instantaneous and effective current; Vector Algebra as applied to alternating current circuit analysis in the solution of problems; series parallel circuits; impedance matching; network theorems; coupled circuits; balanced and unbalanced polyphase circuits; filters; elements of transmission lines; symmetrical components; nonsinusoidal waves; transient conditions; laboratory experiments in measurements; study of instruments, and verification of theorems.

EL. 362.—Electric Circuits. 3 hours and 3 hours laboratory. 4 credits. The second half of the course EL. 361-362. Offered 2, 3.

EL. 363.—Electrical Machinery I. 3 hours and 3 hours laboratory. 4 credits. Prerequisites: MS. 354, PS. 206, EL. 211. Offered 1, 2.

Analysis of ferromagnetic circuits, direct current rotating machinery, reactors, single phase and polyphase transformers.

EL. 441.—Electrical Engineering Seminar. 1 hour. 1 credit. Prerequisite: At least 14 credits in courses in Electrical Engineering. Offered 1.

Discussions of topics from current engineering periodicals, on research projects in progress in the laboratories, and on new developments in industry.

EL. 442.—Electrical Engineering Seminar. 1 hour. 1 credit. The second half of the course EL. 441-442. Offered 2.

EL. 445.—Electrical Instruments, Meters, and Relays. 2 hours and 3 hours laboratory. 3 credits. Prerequisite: EL. 362. Offered 2.

Indicating instruments; demand instruments; recording and integrating; instrument transformers; measurement of circuit constants at low frequency and at radio frequency; measurement of frequency; wave form, power factor and phase angle; vacuum tube instrument.

EL. 452.—Television Engineering. 3 hours and 3 hours laboratory. 4 credits. Prerequisite: EL. 465. Offered 2.

Transmission of pictures; picture standards; scanning methods; scanning generators; scanning and picture reproduction; camera tubes; video amplification; closed television systems; special problems of telecasting; the optimum number of lines; synchronization; vestigial sideband transmission; the video transmitter; receivers; staggertuned amplifiers; the receiving antenna; televising motion pictures; color television.

EL. 462.—Ultra-High Frequency Technique. 3 hours and 3 hours laboratory. 4 credits. Prerequisite: EL. 465. Offered 2.

Methods of generating, transmitting and receiving centimeter microwaves.

EL. 465.—Communication Engineering. 3 hours and 5 hours laboratory. 5 credits. Prerequisites: EL. 346, EL. 362. Offered 1.

Component parts of systems of electrical communications, including circuit constants, vacuum tube amplifiers, oscillators, modulators, detectors, and rectifiers; complete communication systems; propagation of radio waves; antenna systems.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EL. 466.—Communication Engineering. 3 hours and 5 hours laboratory. 5 credits. The second half of the course EL. 465-466. Offered 2.

EL. 467.—Electrical Machinery III. 3 hours and 5 hours laboratory. 5 credits. Prerequisites: EL. 362, EL. 363. Offered 1.

Design, characteristics, and operation of alternating current apparatus particularly transformers, generators, motors. Experimental tests on alternating current apparatus.

EL. 468.—Electrical Machinery IV. 3 hours and 5 hours laboratory. 5 credits. The second half of the course EL. 467-468. Offered 2.

EL. 471.—Electrical Machinery II. 3 hours and 3 hours laboratory. 4 credits. Prerequisites: EL. 362, EL. 363. Offered 1.

For communication majors. Fundamentals of alternating current machinery. Experimental tests on alternating current machinery.

EL. 472.—Electrical Engineering Problems (Electronics). 3 hours and 3 hours computation period. 4 credits. Prerequisites: EL. 465. Offered 2.

Selected problems and projects in radio engineering and electronics with emphasis on the complete solution, including design, manufacture, and test.

EL. 473.—Industrial Electronics. 3 hours and 3 hours laboratory. 4 credits. Prerequisites: EL. 346, EL. 362, EL. 363. Offered 1, 3.

Analysis of vacuum tube application with special emphasis on industrial devices such as high frequency heaters, rectifiers and inverters, timers, photoelectric controls, voltage regulators, and instruments.

EL. 474.—Electrical Engineering Problems (Power). 3 hours and 3 hours computation period. 4 credits. Prerequisite: EL. 467. Offered 2.

Selected problems and projects in the field of electric power engineering with emphasis on the complete solution, including selection, design, application, and operation of electrical equipment and facilities.

EL. 476.—Advanced Industrial Electronics. 2 hours and 3 hours laboratory. 3 credits. Prerequisite: EL. 465 or EL. 473. Offered 2.

Advanced study of industrial applications of electronic devices.

EL. 493.—Electrical Design and Experimental Procedure. Variable credit. Prerequisite: Approval of Instructor. Offered 1, 3.

Special projects are studied and reports prepared thereon.

EL. 494.—Electrical Design and Experimental Procedure. Variable credit. The second half of the course EL. 493-494. Offered 2.

EL. 520.—Nuclear Engineering Instrumentation. 2 hours and 3 hours laboratory. 3 credits. Prerequisite: NR. 400. Pre- or corequisite: EL. 465 or 473. Offered 2.

Counting circuits and other devices for the measurement of radioactivity. Control systems for nuclear reactors. Linear accelerators and other high-energy machines.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EL. 546.—Electric Power Transmission. 3 hours. 3 credits. Prerequisite: EL. 362. Offered 2.

Characteristics of power and communication lines derived from the distributed constant circuit standpoint; traveling and standing waves; impedance loci and transmission line charts.

EL. 550.—Transistor Electronics. 2 hours and 3 hours laboratory. 3 credits. Pre- or corequisite: EL. 465. Offered 1.

The electrical characteristics and circuit applications of transistors.

EL. 564.—Introduction to Electromagnetic Theory. 3 hours. 3 credits. Prerequisite: EL. 362 and approval of instructor. Offered 1.

An introductory presentation of vector analysis and the fundamentals of electromagnetic fields and waves for engineering applications.

EL. 580.—Digital Computer Principles. 3 hours. 3 credits. Prerequisite: Approval of instructor. Offered 1 or 2.

Introduction to programming (including a practice problem on the Statistical Laboratory electronic computer), order codes of typical computers, program libraries, introduction to the design of logical circuits and arithmetic circuits, computer memories, input-output devices, computer system organization.

GRADUATE COURSES

Prerequisites: A college course in Physics, Differential and Integral Calculus, and a minimum of thirty-six credits, or the equivalent in courses in the general field of electrical engineering, together with special prerequisites stated for individual courses.

Though no graduate major may be completed without adequate course work on the 600 level, any course in Electrical Engineering numbered 500 and above is available for graduate credit as part of a candidate's major.

EL. 631.—Advanced Electrical Measurements. 2 hours and 4 hours laboratory. 3 credits. Offered 1.

Theory and practice of electrical measurements at extremes of voltage, current, power and frequency.

EL. 632.—Advanced Electrical Measurements. 2 hours and 4 hours laboratory. 3 credits. The second half of the course EL. 631-632. Offered 2.

EL. 635.—Electric Network Synthesis. 3 hours. 3 credits. Prerequisite or corequisite: MS. 655. Offered 2.

Methods of circuit synthesis for prescribed steady-state or transient response.

EL. 636.—Electric Network Synthesis. 3 hours. 3 credits. The second half of the course EL. 635-636. Offered 3.

EL. 637.—Transients in Linear Systems. 3 hours. 3 credits. Offered 2.

Transient analysis of electrical and mechanical systems stressing Laplace transform methods.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EL. 639.—Electric Power Circuits. 3 hours. 3 credits. Offered 1.

Analysis of polyphase networks, including symmetrical component methods.

EL. 641.—Non-linear Circuits. 3 hours. 3 credits. Offered 1.

Analytical and topological approaches to non-linear circuits; non-linear resonance; relaxation oscillations.

EL. 643.—Communication Lines and Filters. 3 hours. 3 credits. Prerequisite: EL. 546 or equivalent. Offered 3.

Theory and analysis of communication networks; circuits containing transmission lines and waveguides.

EL. 645.—Advanced Electron Tube Circuits. 3 hours. 3 credits. Offered 1.

Advanced treatment of linear and non-linear amplifiers, oscillators, and special circuits, including high frequency considerations.

EL. 646.—Advanced Electron Tube Circuits. 3 hours. 3 credits. The second half of the course EL. 645-646. Offered 2.

EL. 650.—Physical Electronics. 3 hours. 3 credits. Prerequisite: PS. 508 or equivalent as approved by instructor. Offered 2.

Theory of operation and application of solid-state devices. Principles of transistor action. Oxide-coated cathodes. Electroluminescence. Applications of ferroelectrics and ferrites. Piezoelectric devices.

EL. 652.—Theory of Vacuum Tubes. 3 hours. 3 credits. Offered 1.

Fundamental principles of electronic motion, spacecharge effects, and interactions of electrons with electromagnetic fields; analysis of vacuum tube operation.

EL. 653.—Theory of Microwave Vacuum Tubes. 3 hours. 3 credits. Prerequisites: EL. 652, 655. Offered 2. The second half of the course EL. 652-653.

More detailed analysis of klystrons, magnetrons, traveling-wave tubes and other microwave vacuum tubes.

EL. 654.—Theory of Communication. 3 hours. 3 credits. Offered 1.

Modulation and detection, signal, spectra, noise, and the transmission of information.

EL. 655.—Electromagnetic Fields and Waves. 3 hours. 3 credits. Prerequisite; EL. 564 or equivalent. Offered 2.

Electromagnetic theory from the engineering point of view; propagation and reflection of waves, guided waves, resonant cavities, antennas and radiation.

EL. 656.—Electromagnetic Fields and Waves. 3 hours. 3 credits. The second half of the course EL. 655-656. Offered 1.

EL. 657.—Boundary Value Problems. 3 hours. 3 credits. Prerequisite: EL. 655. Offered 3.

Methods of solution of the partial differential equations of electrical engineering. (Laplace, Poisson, wave equation, heat flow) in various coordinate systems and subject to various types of boundary conditions.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EL. 659.—Statistical Communication Theory. 3 hours. 3 credits. Offered 2.

Statistical methods in communication theory; statistical characteristics of messages and noise; correlation functions and spectra; optimum communication systems; rate of transmission of information.

EL. 661.—Logic and Design of Digital Control Circuits. 3 hours. 3 credits. Offered 1, 2.

Boolean algebra; propositional logic; switching devices; combinational circuits; sequential circuits; systems design.

EL. 671.—Advanced Electrical Machinery. 3 hours. 3 credits. Prerequisite or corequisite: EL. 639. Offered 1.

Electrical and mechanical theory of rotating machinery and electrical apparatus.

EL. 672.—Advanced Electrical Machinery. 3 hours. 3 credits. The second half of the course EL. 671-672. Offered 2.

EL. 673.—Closed Loop Systems. (Formerly EL. 670). 3 hours. 3 credits. Prerequisite: EL. 637. Offered 1.

Electrical, mechanical, and electromechanical systems in which feedback is used to modify the system characteristics. Servomechanisms and feedback amplifiers.

EL. 674.—Advanced Closed Loop Systems. 3 hours. 3 credits. Prerequisite: EL. 673 (formerly EL. 670). Offered 2.

Methods of synthesizing continuous and sampled data servomechanism. Application of statistical design principles. Non-linear systems. Consideration will be given to problems in connection with nuclear reactor control.

EL. 681.—Electric Power Systems. 3 hours. 3 credits. Prerequisite: EL. 639. Offered 2.

Steady-state and transient analysis of interconnected power systems; power circuit protection; transient characteristics of apparatus.

EL. 682.—Electric Power Systems. 3 hours. 3 credits. The second half of the course EL. 681-682. Offered 3.

EL. 691.—Special Topics in Electrical Engineering. Variable credit. Offered 1, 3.

Laboratory, lectures, or conferences covering specially selected topics in Electrical Engineering.

EL. 692.—Special Topics in Electrical Engineering. Variable credit. The second half of the course. EL. 691-692. Offered 2.

EL. 695.—Graduate Seminar. 1 hour. 1 credit. Offered 1, 2.

Discussions on topics in fields of graduate study and research.

EL. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

EL. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2, 3.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ENGINEERING GRAPHICS

Instructional Staff 1956-57

Jacunski, E. W., Interim Head; Abbey, W. R., DeReggi, A. S., Hine, E. B., Kephart, R. C., Knight, C. W., Phelps, G. O., Smith, J. H., Stockstill, R. E., Walker, L. W., Williams, H. B.

EGR. 181.—Engineering Drawing. 1 hour and 5 hours drawing. 3 credits. Corequisite: C. 42. Offered 1, 2, 3.

How to make and how to read engineering drawings. French and Vierck, ENGINEERING DRAWING, 8th EDITION; PROBLEMS IN ENGINEERING DRAWING, selected by department. Equipment costing about thirty dollars is required but will be used extensively in later courses.

EGR. 182.—Descriptive Geometry. 1 hour and 5 hours drawing. 3 credits. Prerequisite: EGR. 181; Corequisite: MS. 105. Offered 1, 2, 3.

Graphical representation of basic geometrical elements and the solution of related space problems. Grant, PRACTICAL DESCRIPTIVE GEOMETRY; Grant, PRACTICAL DESCRIPTIVE GEOMETRY PROBLEMS, SERIES I.

EGR. 282.—Mechanism and Kinematics. 2 hours and 3 hours laboratory. 3 credits. Prerequisite: EGR. 182; Corequisite: PS. 205. Offered 1, 2, 3.

Mechanisms in machines; friction drives, belting, cams, gears, planetary gears; velocities and accelerations of moving parts. Hinkle, KINEMATICS OF MACHINES.

EGR. 421.—Graphical Dynamics of Machinery. 2 hours and 3 hours laboratory. 3 credits. Prerequisites: EGR. 282, EM. 366. Offered 2.

Kinematics, statics, and dynamics applied to machinery. The study of static and inertia forces in machines, balancing machines, flywheel effects, and turning-effect diagrams. The practical applications in machinery of the preceding theoretical courses. Ham, Crane, Rogers, MECHANICS OF MACHINERY.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ENGINEERING MECHANICS

Instructional Staff 1956-57

Sawyer, W. L., Head; Bruun, P., Cooley, I. D., Edson, C. G., Gerritsen, F., Hill, C. C., Hrubecky, H. F., Huang, T. C., Lawson, S. C. D., Nash, W. A., Neff, T. O., Leendertse, J. J., Shaw, W. A.

EM. 313.—Fluid Mechanics. 3 hours and 3 hours laboratory. 4 credits. Prerequisites: EM. 365, MS. 354. Offered 1, 2, 3.

Mechanics of compressible and incompressible fluids. Special emphasis on viscosity effects. Bernoulli's theorem, surface and form resistance, impulse-momentum principle, lift and drag, laws of similarity and dimensional analysis. Study includes statics, and dynamics, and the application of basic principles to the flow of fluids through measuring devices and pipes, and around immersed bodies.

EM. 314.—Hydraulic Engineering. 3 hours. 3 credits. Prerequisite: EM. 313 or EM. 327. Offered 2.

Operational and design analysis of pipe flow problems; pipes in series by use of equivalent lengths; pipes in parallel by method relaxation; principles of open channel flow; determination of normal and critical depths; hydraulic drops and jumps; weirs and sluices; profile classifications and analysis; design of trapezoidal channels; practical survey of centrifugal pumps; performance charts and specific speeds; pump selection on basis of manufacturer's data.

EM. 327.—Hydraulics. 3 hours and 3 hours laboratory. 4 credits. Prerequisites: EM. 365, MS. 354. Offered 1, 2.

For engineering students majoring in Civil Engineering and Agricultural Engineering. The principles underlying the behavior of fluids at rest and in motion, transportation and measurement of fluids, pumping and power generation.

EM. 365.—Engineering Mechanics—Statics. 3 hours. 3 credits. Prerequisites: PS. 205, ML. 182; Corequisite: MS. 354. Offered 1, 2, 3.

Principles of statics; resultants and equilibrium of coplanar force systems; resultant and equilibrium of space force systems; trusses containing two force members; structures containing three force members; friction; centroids; moments of inertia; Mohr's circle.

EM. 366.—Engineering Mechanics—Dynamics. 3 hours. 3 credits. Prerequisites: EM. 365, MS. 354. Offered 1, 2, 3.

Dynamics of particles and rigid bodies for rectilinear translation, curvilinear translation, rotation and plane motion; mass moment of inertia; work and energy; impulse and momentum.

EM. 367.—Strength of Materials. 3 hours. 3 credits. Prerequisites· EM. 365, MS. 354. Offered 1, 2, 3.

Tension, compression and shear, stresses and strains; combined stresses; Mohr's circle; riveted joint for pressure vessel and structural work; torsion; bending moments; stresses, and deflection of beams; eccentric loading; columns.

EM. 369.—Applied Mechanics for Chemical Engineers. 2 hours and 2 hours laboratory. 3 credits. Prerequisites: EM. 365, MS. 354. Offered 1.

Materials of construction; mechanical properties of materials; theory and application to design of pressure vessels: piping; attachments and closures; equipment supports and handling equipment common to Chemical Engineering construction.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EM. 377.—Mechanics of Materials. 4 hours. 4 credits. Prerequisites: EM. 365, MS. 354. Offered 1, 2.

Stress and strain, tension, compression, shear, torsion of circular shafts, shear and moment in beams, deflection of beams, riveted and welded connections, combined stresses, columns, fatigue stresses, stress concentration, impact loading.

EM. 512.—Stress Analysis for Nuclear Engineers. 3 hours. 3 credits. Prerequisites: EM. 365, MS. 354. Offered 1, 2.

Stress and deformation, stresses due to axial loads, pressure containers, torsional stress, members with transverse loads, axial loads combined with bending, column action, combined stresses, elastic strain energy, plastic design, application to clad fuel plates, rods, cylinders, pressure shells, thermal shields.

EM. 513.—Fluid Mechanics for Nuclear Engineers. 3 hours. 3 credits. Prerequisites: EM. 365, MS. 354. Offered 1, 2.

Fluid statics, kinematics of fluid flow, impulse-momentum principle, similarity and dimensional analysis, viscosity and friction loss, flow of incompressible fluids in pipes, fluid measuring devices, flow of compressible ideal fluids, flow of compressible viscous fluids and two phase flow, experimental methods.

EM. 546.—Fundamental Vibration Analysis. 3 hours. 3 credits. Prerequisites: EM. 366, EM. 367. Offered 1.

Undamped free vibrations and natural frequencies of systems of one degree of freedom, damped and forced vibrations, vibrations of systems with more than one degree of freedom. Shock mounting of machines and instruments, vibration isolation. Instruments used for vibration analysis. Holzer's method for torsional vibrations.

EM. 547.—Advanced Experimental Methods in Mechanics. 1 hour and 3 hours laboratory. 2 credits. Offered 1. Corequisite: EM. 546 or AN. 495.

Principles of vibration measuring instruments. Velocity pickups, accelerometers, dynamic strain indicators. Use of indicating and recording instruments, recording oscillographs, tape recorders. Laboratory investigations of steady-state and transient phenomena.

EM. 564.—Advanced Strength of Materials. 3 hours. 3 credits. Prerequisite: EM. 367 or EM. 377. Offered 1, 3.

Special problems in localized stress, principal stresses, strains due to principal stresses, thick wall cylinders, shear center, unsymmetrical bending, curved flexural members, closed rings, flat plates.

EM. 565.—Advanced Strength of Materials. 3 hours. 3 credits. Prerequisite: EM. 564. Offered 2. A continuation of course EM. 564.

Torsional stresses with application of membrane analogy; laboratory methods for strain and stress determination; buckling stresses; deflection of structures; deformations beyond elastic limit; plastic flow; creep; yield.

GRADUATE COURSES

EM. 633.—Advanced Hydraulic Engineering. 3 hours. 3 credits. Prerequisite: EM. 313 or EM. 327. Offered 1.

Detailed analysis of varied flow; development and use of a universal flow function; practical survey of local phenomena: weirs, sluices, bends, transitions, etc. Design of a complete watercourse.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EM. 634.—Hydraulic Measurements. 3 hours. 3 credits. Prerequisite: EM. 313 or EM. 327. Offered 2.

Survey of various devices for measuring discharge, velocity, and viscosity. Detailed study of basic principles involved.

EM. 635.—Theory of Hydraulic Similitude. 3 hours. 3 credits. Prerequisite: EM. 313 or EM. 327. Offered 3.

Review of dimensional analysis. Significance of geometric, kinematic, and dynamic similarities. Criteria for relating model data to prototype.

EM. 636.—Fluid Dynamics. 3 hours. 3 credits. Prerequisites: MS. 521, EM. 313 or EM. 327 or consent of instructor. Offered 1.

Flow of non-viscous fluids, Euler's equations, equations of continuity, irrotational flow, velocity potential and applications. Two-dimensional flow. Application of conformal transformations, flow past a flat plate, flow around a cylinder, flow around an airfoil. Blasius Theorem, Magnus effect.

EM. 637.—Fluid Dynamics. 3 hours. 3 credits. Prerequisite: EM. 636. Offered 2. A continuation of course EM. 636.

Vortex motion, pressure distribution near vertices. Flow of viscous fluids, Navier-Stokes equations and application to special types of flow. Boundary layer theory, boundary layer thickness, momentum considerations, theorems predicting boundary layer separation. Compressible flow, equations of motion in three dimensions.

EM. 641.—(Identical with EL. 641). Non-linear Mechanics. 3 hours. 3 credits. Offered 2.

Analytical and topological approaches to non-linear mechanics; non-linear resonance, relaxation oscillations.

EM. 644.—Advanced Dynamics. 3 hours. 3 credits. Prerequisite: EM. 366. Offered 1.

Dynamics of particles and rigid bodies applied to advanced engineering problems, utilizing Newtonian methods, work and Energy principle, impulse and momentum principle, Lagrangian equations function, Hamilton's principle, and Hamilton-Jacobi equations. Selected topics.

EM. 646.—Advanced Vibration Analysis. 3 hours. 3 credits. Prerequisites: EM. 546, MS. 521. Offered 2.

Longitudinal and torsional vibrations of bars, lateral vibrations of bars, lateral vibrations of membranes, plates, and shells. Application of the Rayleigh-Ritz method. Lagrange's equations. Vibrations of systems with non-linear characteristics.

EM. 666.—Theory of Elasticity. 3 hours. 3 credits. Prerequisites: EM. 367 or EM. 377, and MS. 521. Offered 1.

General equations of equilibrium and compatibility; stress, strain and displacement of elastic bodies; applications to the bending of curved and prismatic bars, torsion of prismatic bars and circular shafts of variable diameter; plane stress and plane strain in beams, disks, thick cylinders, semi-infinite plates, and around holes and notches.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EM. 667.—Theory of Elastic Stability. 3 hours. 3 credits. Prerequisites: EM. 367 or EM. 377, and MS. 521. Offered 2.

Lateral buckling of beams; bending and buckling of thin plates and shells; shear buckling; general failure of columns by bending, twisting, or shear; buckling at stresses above elastic range. Application to practical problems.

EM. 668.—Mechanics of Orthotropic Materials. 3 hours. 3 credits. Prerequisites: EM. 367 or EM. 377, and MS. 521, MS. 522. Offered 2.

Plane stress and plant strain; stresses and strains in three dimensions. Equation of equilibrium; Mohr's circle; form factors; shear; direct compression; combined stresses; practical applications.

EM. 669.—Elastic Energy Theory. 3 hours. 3 credits. Prerequisite: EM. 367 or EM. 377. Offered 1.

Statically determinate and statically indeterminate frames; statically determinate and statically indeterminate beams; combined stresses; deformation due to shear; resilience; influence lines; theory of least work; columns.

EM. 670.—Photoelasticity. 2 hours and 3 hours laboratory. 3 credits. Prerequisite: EM. 666. Offered 2.

Stress-strain relations; stress at a point, differential equations of equilibrium; fundamentals of optics; double refraction; polarized light; stress optic law; stress patterns; isoclinics and stress trajectories; principal shear and normal stresses; slope equilibrium methods; shear difference method. Laboratory work in making models, experimental stress determination.

EM. 671.—Theory of Plasticity. 3 hours. 3 credits. Prerequisites: EM. 367 or EM. 377, MS. 521. Offered 2.

Definitions of stress and strain, behavior of a perfectly plastic material, yield conditions, theories of plastic deformation. Problems of bars and cylinders of ideally plastic materials. Problems in the plastic flow of strain-hardening materials. Theory of metal-forming processes; drawing, extruding, rolling, forging, and forming of various shapes.

EM. 672.—Theory of Plates. 3 hours. 3 credits. Prerequisites: EM. 367 or EM. 377, MS. 521. Offered 1.

Fundamental equations for the bending of thin plates with small deformations. Application to circular, rectangular, triangular, and elliptic plates subject to various lateral loads. Analysis of plates subject to combined lateral loads and forces acting in the middle plane of the plate. Large deformations of plates. Energy methods applied to plate problems.

EM. 673.—Theory of Shells. 3 hours. 3 credits. Prerequisites: EM. 367 or EM. 377, MS. 521, MS. 522 or MS. 639. Offered 2.

General theory of deformation of thin shells with small deflections. Specialization to the cases of cylindrical, spherical, and conical shells subject to various loadings. Membrane theory of shells and its application. Discussion of large deformation theories for shells. Applications to the design of pressure vessels, shell-like roof structures, and submarines. Vibrations of cylindrical shells.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EM. 688.—Mechanics of Continuous Media. 3 hours. 3 credits. Prerequisites: EM. 666, MS. 521, MS. 522. Offered 3.

A comprehensive, unified treatment of the mathematical theories of solid and fluid mechanics, including gases. Stress-strain relations for continuous media and equations of motion. Thermo-elastic relations for isotropic solids. Finite deformations of an elastic solid. Role of the potential theory in mathematical physics. Significance of Poisson's and Laplace's equations in elasticity, hydrodynamics, heat conduction, electricity and magnetism, and acoustics. Wave motion in gases, liquids, and solids. Theory of the mechanics of a granular media, theory of the mechanics of a porous media.

EM. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

ENGLISH

Instructional Staff 1956-57

Robertson, C. A., Head; Baughan, D. E., Bigelow, G. E., Boone, L. P., Bowers, R. H., Childers, W. C., Clark, W. A., Congleton, J. E., Conner, F. W., Cox, E. H., Cutler, R. J., Fain, J. T., Fogle, S. F., Gehan, F. E., Harkness, D. R., Harris, D. P., Hart, T. A. E., Herbert, T. W., Hodges, J. R., Kirkland, E. C., Lytle, A. N., McHughston, R. W., Morris, A. C., Mounts, C. E., Murphree, A. A., Oras, A., Pyles, T., Ruff, W., Starr, N. C., Stryker, D., Vowles, R. B., Warfel, H. R., Wilson, J. L., Wise, J. H., Wrenn, C. L.

Students intending to major in English in the College of Arts and Sciences should, at the earliest possible opportunity, consult with the student counselor of the Department, and plan their programs.

The Departmental Major: For the departmental major the following courses, or their equivalents, are required: EH. 201-202 and one semester of Shakespeare (EH. 401 or EH. 402). At least half of the major program should be in courses numbered 300 or above, and at least six hours should be selected from the following group of studies: EH. 495, EH. 496, EH. 497, EH. 498, EH. 501, EH. 502, EH. 506, EH. 509. Students majoring in English are advised to include EH. 506 (History of the English Language), especially those anticipating graduate study in English. EH. 255 and EH. 356 may not be counted for credit towards the minimum departmental major. A foreign language should be elected at least as early as the sophomore year.

In exceptional cases, specified departmental requirements, including prerequisites, may be waived by consent of the departmental adviser.

EH. 133.—Effective Writing. 3 hours. 3 credits. Prerequisite: C-3, or permission of C-3 Course Chairman. Offered 1, 2.

Designed to aid the student to present his ideas in writing which is not only accurate and clear but pleasing and attractive to the reader. Students are urged to do creative work.

EH. 134.—Contemporary Reading. 3 hours. 3 credits. Prerequisite: C-3, or permission of C-3 Course Chairman. Offered 2.

Designed to aid the student in planning for himself a well-rounded program in reading, which will serve to keep him abreast of the best in contemporary thought. Some time will be spent in introducing each student to the bibliography and writing in the area of his special professional interest.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EH. 201.—Introduction to World Literature. 3 hours. 3 credits. May be taken for credit without EH. 202. Prerequisite: C-3. Offered 1, 2.

An introductory course on the backgrounds of English language and literature, with readings from selected masterpieces of the ancient, medieval, and renaissance worlds, from Homer to Cervantes.

EH. 202.—Introduction to English Literature. 3 hours. 3 credits. The second half of the course EH. 201-202. May be taken for credit without EH. 201. Prerequisite: C-3. Offered 1, 2.

Readings and lectures in the great masterpieces of English literature. Selections chiefly from the work of Chaucer, Shakespeare, Milton, Swift, Pope, Wordsworth, Keats, and Browning.

EH. 209.—The Short Story. 2 hours. 2 credits. Prerequisite: C-3. Offered 1.

The understanding and appreciation of the short story as a literary type. Lectures, readings.

EH. 212.—Advanced Composition. 2 hours. 2 credits. Prerequisite: C-3. Offered 1, 2.

Advanced studies in composition and précis writing. Designed to meet the needs of students desiring additional training in writing and special preparation for professional or graduate study.

EH. 215.—Introduction to American Literature. 3 hours. 3 credits. Prerequisite: C-3. Offered 1, 2.

A selection of major American writers from Benjamin Franklin to Robert Frost. Emphasis is placed on understanding and critical appreciation rather than on literary history.

EH. 225.—Ideas and Themes in Literature. 3 hours. 3 credits. Prerequisite: C-3. Offered 1, 2.

Readings in some of the masterpieces of the literature of the world, centering around the discussion of enduring themes, such as love, honor, loyalty, patriotism, etc. The choice of particular themes and readings may vary from term to term.

EH. 235.—Word Study. 2 hours. 2 credits. Offered 1, 2.

Designed to give the student a view of the English language in its relationship to the other languages of the Indo-European family and of the manifold sources of its word stock. Exercises and drills provide effective ways of increasing vocabulary.

EH. 255.—Business Communications. 3 hours. 3 credits. Prerequisite: C-3. Offered 1, 2.

Instruction and practice in giving short oral reports, dictating and writing the most generally used business letters, and planning and executing short written reports, in accordance with the standards of business usage. The student is introduced to business and professional publications, corporation and municipal reports, and other media of communication.

EH. 306.—Modern English Grammar. 3 hours. 3 credits. Prerequisite: C-3 and C-5. Offered 1, 2.

A systematic review of current English grammar, including attention to functional aspects of sentence structure, punctuation, and other problems of the mechanics of composition.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EH. 310.—The American Novel. 2 hours. 2 credits. Prerequisite: C-3 and C-5. Offered 2.

The history of the American novel. Reading of representative novels by major American writers. Lectures, reports.

EH. 318.—The Literature of the South. 3 hours. 3 credits. Prerequisite: C-3 and C-5.

The poetry and prose written by Southerners or reflecting the life in the region. Chief emphasis on the nineteenth and twentieth centuries.

EH. 325.—American and British Drama of the 19th Century. 2 hours. 2 credits. Prerequisite: C-3 and C-5.

Emphasis upon principal plays, playwrights, and dramatic tendencies.

EH. 327.—Imaginative Writing. 2 hours. 2 credits. Prerequisite: C-3 and C-5. Offered 1, 2.

Designed to help the student who desires guidance in developing his capacity for original work. Group discussion, individual conferences, many papers.

EH. 356.—Report Writing. 3 hours. 3 credits. Prerequisite: C-3 and C-5. Offered 1, 2.

For professional and scientific students needing specialized training in the writing of technical reports, professional papers, and research investigations.

EH. 361.—The English Novel. 2 hours. 2 credits. May be taken for credit without EH. 362. Prerequisite: C-3. Offered 1.

The development of the novel from earlier forms; the great novelists of the eighteenth century.

EH. 362.—The English Novel. 2 hours. 2 credits. The second half of the course EH. 361-362. May be taken for credit without EH. 361. Prerequisite: C-3. Offered 2.

The great novelists of the nineteenth century.

EH. 363.—Contemporary Literature: Drama. 3 hours. 3 credits. Prerequisite: C-3 and C-5. Offered 2.

Recent and contemporary drama, with emphasis upon such major English and American playwrights as Shaw and Eugene O'Neill. The work of Ibsen and other Continental writers will be treated briefly.

EH. 365.—Contemporary Literature: Fiction. 3 hours. 3 credits. Prerequisite: C-3 and C-5. Offered 1, 2.

The most important British and American writers of twentieth-century prose fiction, with major emphasis upon recent novelists.

EH. 366.—Contemporary Literature: Poetry. 3 hours. 3 credits. Prerequisite: C-3 and C-5. Offered 1.

Reading, critical interpretation, and discussion of modern British and American poetry, with chief emphasis upon recent poetry.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EH. 399.—Practical Criticism. 3 hours. 3 credits. Prerequisite: C-3 and C-5. Offered 1.

An intensive study of selected narratives, poems, and dramas, leading towards a critical awareness of the nature of literary art.

EH. 401.—Shakespeare. 3 hours. 3 credits. Prerequisite: C-3, C-5, and one course in English or Speech. Offered 1, 2.

Devoted chiefly to the romantic comedies and the history plays, including *A Midsummer Night's Dream, The Merchant of Venice, Much Ado, As You Like It, Twelfth Night, Richard the Second,* and *Henry the Fourth.* As an aid to the reading of Shakespeare, some of the most interesting features of the Elizabethan stage and drama are treated briefly.

EH. 402.—Shakespeare. 3 hours. 3 credits. Prerequisite: C-3, C-5, and one course in English or Speech. Offered 1, 2.

The great tragedies will be studied, notably *Hamlet, Othello, King Lear, Macbeth,* and *Antony and Cleopatra.*

EH. 407.—Introduction to Folklore. 3 hours. 3 credits. Prerequisite: C-3 and C-5.

Reading, discussion, and critical study of folk tales, legends, proverbs, etc. Their origin, spread, and influence on various literatures. Their utilization by teachers and creative artists.

EH. 408.—Ballads and Folksongs. 3 hours. 3 credits. Prerequisite: C-3 and C-5. Offered 2.

English and Scottish popular ballads: their origin, development, and spread to America. American folksongs: their nature, development, and place as social and folk documents.

EH. 464.—World Drama. 3 hours. 3 credits. Prerequisite: C-3 and C-5. Offered 1.

A survey of world drama from its origins in ancient times down to the rise of realism. Some of the more important plays in the repertorium of dramatic literature, from Aeschylus to Turgenev, will be read, analyzed, and discussed.

EH. 480.—English in the Secondary School. 3 hours. 3 credits. Prerequisite: C-3, C-5, and one course in English. Offered 1.

Designed to help teachers of English by (1) a review of the content, both the language and the literature, of secondary school English, with attention to some of the methods widely used in high school English courses, and (2) a study of both the ultimate and the immediate objectives of the secondary English program.

EH. 491.—Children's Literature. 3 hours. 3 credits. Prerequisite: C-3 and C-5. Offered 1, 2.

A course designed to arouse and satisfy a genuine interest in children's books apart from school text books, to aid the student to obtain a better working knowledge of this literature, and to make him more aware of degrees of excellence in content and form.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EH. 492.—Literature for the Adolescent. 3 hours. 3 credits. Prerequisite: C-3, C-5, and one course in English.

A survey of the different types of reading the adolescent (13 to 18) pursues, with special emphasis upon the criteria for choosing good books, and upon developing a familiarity with the many books for young people of this age.

EH. 493.—Great Books of the Western World. 3 hours. 3 credits. May be taken for credit without EH. 494. Prerequisite: C-3 and C-5. Offered 1.

Many of the great classics which have germinated our culture and moulded our modes of thought and feeling will be read wholly or in part, analyzed, discussed. EH. 493 covers the period from the classical past to the Renaissance.

EH. 494.—Great Books of the Western World. 3 hours. 3 credits. The second half of the course EH. 493-494. May be taken for credit without EH. 493. Prerequisite: C-3 and C-5. Offered 2.

Covers the period from the Renaissance to modern times.

EH. 495.—Major Writers of the Renaissance. 3 hours. 3 credits. Prerequisite: C-3, C-5 and one course in English. Offered 1.

Selections from the best works of principal writers other than Shakespeare, with special emphasis on the poetry of Milton.

EH. 496.—Major Writers of the Neoclassic Period. 3 hours. 3 credits. Prerequisite: C-3, C-5, and one course in English. Offered 2.

Selections from the best works of such writers as Dryden, Congreve, Addison, Swift, Pope, Fielding, Johnson, and Boswell.

EH. 497.—Major Writers of the Romantic Period. 3 hours. 3 credits. Prerequisite: C-3, C-5, and one course in English.

Selections from the best works of such writers as Wordsworth, Coleridge, Scott, Lamb, Byron, Shelley, and Keats.

EH. 498.—Major Writers of the Victorian Era. 3 hours. 3 credits. Prerequisite: C-3, C-5, and one course in English.

Selections from the best works of such writers as Tennyson, Browning, Carlyle, Ruskin, Arnold, Dickens, and Thackeray.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

The courses numbered in the 500's are designed primarily for advanced undergraduates and beginning graduate students. They may be taken for graduate major credit when approved by the departmental advisor or by the student's graduate supervisory committee. Students taking these courses for graduate major credit will be required to do additional readings and reports. Programs for all graduate degrees must include approved course work at the 600 level or above.

EH. 501.—American Literature. 3 hours. 3 credits. May be taken for credit without EH. 502. Prerequisite: C-3, C-5, and one course in English. Offered 1.

A critical and historical survey of American literature from 1607 to 1865.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EH. 502.—American Literature. 3 hours. 3 credits. The second half of the course EH. 501-502. May be taken for credit without EH. 501. Prerequisite: C-3, C-5, and one course in English. Offered 2.

Covers the period from 1865 to the present.

EH. 506.—History of the English Language. 3 hours. 3 credits. Prerequisite: C-3, C-5, and one course in English or in a foreign language. Offered 1, 2.

The nature, origin, and development of the English language, with special stress upon structural and phonetic changes and upon the principles which govern modern usage.

EH. 509.—Chaucer. 3 hours. 3 credits. Prerequisite: C-3, C-5, and one course in English. Offered 1.

Reading and critical study of the *Canterbury Tales.*

EH. 530.—Individual Work in Creative Writing. 3 hours. 3 credits. Prerequisite: EH. 327 or equivalent, consent of instructor, and approval of department head. Offered 1, 2.

Individual projects in creative composition for qualified students interested in the writing of fiction or poetry as art forms.

COURSES FOR GRADUATES

Prerequisite: An undergraduate major in English or its equivalent. Such a major must present at least twenty-four semester hours of English, including courses in important periods of English literary history, American literature, and the history of the English language. Adequate preparation in such closely related fields as history, philosophy, and foreign language is presupposed.

EH. 600 is required of all graduate majors.

The Department of English offers work leading to the degrees of Master of Arts and Doctor of Philosophy. Students wishing to take graduate work should consult the departmental graduate advisers. A booklet descriptive of the doctoral program is available upon application to the Department.

EH. 600.—Bibliography and Methods of Research. 2 hours. No credit. Offered 1, 2.

EH. 605.—Drama of the Restoration and 18th Century. 3 hours. 3 credits. Offered 2.

A survey of the English stage from Dryden to Sheridan.

EH. 610.—Chaucer. 3 hours. 3 credits. Offered 2.

Reading and critical study of *Troilus and Criseyde* and the minor poems.

EH. 611.—Old English. 3 hours. 3 credits. Offered 1.

Old English grammar and reading from selected monuments.

EH. 612.—Middle English. 3 hours. 3 credits. Offered 2.

Middle English grammar and reading from selected monuments.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EH. 613.—The Renaissance in England. 3 hours. 3 credits. Offered 1.

The origin of the movement in Italy and its spread in England; the 16th-century poets and prose writers.

EH. 614.—The Renaissance in England. 3 hours. 3 credits. Offered 2.

Poetry and prose of the 17th century through Milton.

EH. 615.—Milton. 3 hours. 3 credits. Offered 2.

EH. 617.—Spenser. 3 hours. 3 credits.

EH. 619.—Elizabethan Drama. 3 hours. 3 credits. Offered 1.

EH. 627.—The Craft of Writing. 3 hours. 3 credits. Offered 1.

This course is intended for students interested in writing fiction as an art. Conducted by the laboratory method and private conference, with the aim of developing the student's writing talent and critical sense. Novels and short stories of the students and of authors of established reputation will be read, analyzed, and discussed.

EH. 628.—The Craft of Writing. 3 hours. 3 credits. Offered 2.

A continuation of the work of EH. 627, with the aim of providing further experience for practitioners of the short story or the novel under the guidance of a writer in residence.

EH. 630.—Individual Work. 3 hours. 3 credits. Prerequisite: 12 hours of English and approval of department head. Offered 1, 2.

Designed for graduate students needing work in subjects not available in currently offered courses. With change of content EH. 630 may be repeated for credit.

EH. 633.—English Literature of the 18th Century. 3 hours. 3 credits. Offered 1.

A study of English prose and poetry from Dryden through Pope.

EH. 634.—English Literature of the 18th Century. 3 hours. 3 credits. Offered 2.

The Age of Johnson

EH. 641.—Beowulf. 3 hours. 3 credits. Offered 2.

EH. 643.—The English Romantic Period. 3 hours. 3 credits. Offered 1.

Chief emphasis on the work of Burns, Blake, Coleridge, and Wordsworth.

EH. 644.—The English Romantic Period. 3 hours. 3 credits. Offered 2.

Chief emphasis on the work of Byron, Keats, and Shelley.

EH. 653.—English Literature of the Victorian Period. 3 hours. 3 credits. Offered 1.

The Victorian prose writers.

EH. 654.—English Literature of the Victorian Period. 3 hours. 3 credits. Offered 2.

The Victorian poets.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EH. 665.—Literary Criticism, Historical and Analytical. 3 hours. 3 credits. Offered 1.

Classical, medieval, and renaissance criticism.

EH. 666.—Literary Criticism, Historical and Analytical. 3 hours. 3 credits. Offered 2.

Criticism from the eighteenth century to the present.

EH. 669.—English Prosody. 3 hours. 3 credits.

An historical and descriptive survey, including the European background.

EH. 691.—The Teaching of Composition in College. 2 hours. 1 credit. Offered 1.

Designed to give practical experience in evaluating, criticizing, and grading college composition work under the supervision of senior staff members in English.

EH. 692.—The Teaching of Literature in College. 2 hours. 1 credit. Offered 2.

Designed to give practical experience in classroom performance to students specializing in English language and literature; to aid in the professional training of those preparing to teach literature at the college level.

EH. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2.

EH. 735.—Seminar in Restoration and 18th Century Literature. 3 hours. 3 credits. Offered 1.

EH. 745.—Seminar in Romanticism. 3 hours. 3 credits. Offered 1.

EH. 750.—The English Language Since 1400. 3 hours. 3 credits. Offered 1.

EH. 753.—Seminar in Linguistics. 3 hours. 3 credits.

EH. 755.—Seminar in Medieval Literature. 3 hours. 3 credits.

Topics embrace Old English literature and Middle English literature, including Chaucer.

EH. 761.—Seminar in Shakespeare. 3 hours. 3 credits. Offered 2.

EH. 763.—Seminar in English Renaissance Literature. 3 hours. 3 credits. Offered 1.

EH. 771.—Seminar in Victorian Literature. 3 hours. 3 credits. Offered 2.

EH. 781.—Seminar in New England Transcendentalism. 3 hours. 3 credits. Offered 1.

EH. 783.—Seminar in American Prose. 3 hours. 3 credits. Offered 1, 2.

Subjects: American biography, autobiography, essay, and history; American criticism.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EH. 787.—Seminar in American Poetry. 3 hours. 3 credits. Offered 2.

EH. 789.—Seminar in Southern Literature. 3 hours. 3 credits.

EH. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2.

ENTOMOLOGY

Instructional Staff 1956-57

Creighton, J. T., Head; Blanton, F. S.; Christie, J. R.*, Hetrick, L. A., Kuitert, L. C.*, Muma, M. H.*, Murphey, M., Jr., Simanton, W. A.*, Tissot, A. N.*, Wilson, J. W.*.

EY. 203.—Economic Entomology. 2 hours, and 2 hours laboratory. 3 credits. This course, or EY. 307, is prerequisite or corequisite for all courses in Entomology except EY. 303, EY. 351 and EY. 450. Offered 1, 2, 3.

An introduction to economic entomology, which is based upon a study of the life histories and control of major insect enemies of American agricultural crops. Particular stress is placed upon southern and Florida economic insects. This course is designed for all students in the College of Agriculture either as a prerequisite or corequisite for other entomology courses. Textbook, "Destructive and Useful Insects", by Metcalf, Flint, and Metcalf.

EY. 303.—Introductory Economic Nematology. Identical with PT. 303, SLS. 303, and VY. 303. 2 hours, and 2 hours laboratory. 3 credits. Prerequisites: C-61 and BLY. 161, or BTY. 101-102. Offered 1.

An introduction to nematology, including a study of the life histories and control of the major nematodes affecting plants, domestic animals, and man. The course also includes the study of the relationships of nematodes to insects and closely related arthropods, either as parasites of these animals or the utilization of such animals as intermediate hosts. Given jointly with the Departments of Plant Pathology, Soils and Veterinary Science.

EY. 307.—General Entomology. 2 hours, and 2 hours laboratory. 3 credits. This course, or EY. 203, is prerequisite or corequisite for all other courses in Entomology, except EY. 303, EY. 351, and EY. 450. Offered 1.

The characteristics, biology, and habits of the insects in the major families of all insect orders. All students planning to major or minor in Entomology should take this course, and not EY. 203. Textbook, "Introduction to Entomology," by Comstock.

EY. 311-312-313-314.—Entomology Seminar. 1 hour. ½ credit each; group total two credits. Offered 1, 2.

Papers dealing with some phase of entomology. At intervals, students appear before the seminar group to give talks or present papers dealing with the subject selected.

EY. 351.—Forest Entomology (Pests of Forest and Shade Trees). 2 hours, and 2 hours laboratory. 2 or 3 credits. For students in the School of Forestry. Majors in Entomology and other departments may enroll with permission of the Head of the Department at 2 credit level. Offered 1.

The major insect pests of forest and shade trees, including identification, life histories, and control. Textbook, "Insect Enemies of Eastern Forests," by Craighead.

*Graduate faculty. Members of the staff of the Florida Agricultural Experiment Station.
The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EY. 401-402.—Problems in Entomology. 4 to 8 hours laboratory. 2-4 credits each; group total 4-8 credits. Prerequisites: EY. 203 or EY. 307, and the basic course in selected specialized field. Offered 1, 2, 3.

Consists of an entomological problem for study which may be in any field of specialization, including histology, morphology, taxonomy, embryology, biological control, ecology, toxicology, plant quarantine, biology, life history and habits, commercial entomology, structural pest control, and medical and veterinary entomology. Textbook to be selected based upon research problems.

EY. 405.—Insect Control (Insecticides). 1 hour, and 4 hours laboratory. 3 credits. Prerequisite or corequisite: EY. 203, or EY. 307. Offered 1.

The control of insects and closely related arthropods by chemical and cultural methods. Insecticides, the effects of insecticides upon plants and animals, and the various methods of application. For all students in Agriculture. Practical training to meet the everyday problems of insect attacks upon man, domestic animals, and cultivated plants. Textbook, "Manual of Insect Control," by Creighton.

EY. 408.—Insect Morphology and Physiology. 2 hours, and 4 hours laboratory. 4 credits. Prerequisite: EY. 203, or EY. 307. Offered 1.

The external and internal anatomy of insects. The functioning of the parts of the body and the systems of organs. Textbook, "Principles of Insect Morphology," by Snodgrass.

EY. 411.—Apiculture (An Introduction to Bee Culture). 1 hour, and 2 hours laboratory. 2 credits. Prerequisite or corequisite: EY. 203, or EY. 307. Offered 2.

The organization of a bee colony, life processes, races of bees, manipulation, value of colonies, nectar and pollen sources, pollination value, diseases, selection of apiary site, economic importance of industry, equipment, and marketing of products. Textbook, "Hive and the Honey Bee," by Grout.

EY. 420.—Medical Entomology. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite or corequisite: EY. 203, or EY. 307. Offered 1.

The arthropods that are parasitic upon man, including insects and their near relatives, and their relationship to disease. Textbook, "Medical Entomology," by Matheson.

EY. 422.—Veterinary Entomology. 1 hour, and 2 hours laboratory. 2 credits. Prerequisite or corequisite: EY. 203, or EY. 307. Offered 2.

The arthropods that are parasitic upon domestic animals, including insects and their near relatives, and their relationship to disease. Textbook, "Medical Entomology," by Herms.

EY. 430.—Insect Laboratory Technique. 2 hours laboratory. 1 credit. Prerequisite or corequisite: EY. 203, or EY. 307. Offered 1.

A study of the techniques involved in the preparation of insect material for microscopic study.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EY. 432.—Florida Fruit and Vegetable Insects. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite or corequisite: EY. 203, or EY. 307. Offered 2, 3.

The identification, life histories, and control of the major insect pests of Florida's fruit and vegetable crops. For all students in the College of Agriculture, especially those interested in economic plant life.

EY. 441.—Plant Quarantine, Inspection, and Control. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite or corequisite: EY. 203, or EY. 307. Offered 2, even years.

The legal, operational, and administrative principles of plant quarantine, inspection and control; together with a study of plant quarantine organization methods, and control and eradication efforts of the past and present.

EY. 450.—Public Health Entomology (Entomology and Sanitation). 2 hours, and 2 hours laboratory. 3 credits. Offered 2, odd years.

Insects and related animals affecting the health and comfort of man. Textbook, "Medical Entomology," by Matheson.

EY. 460.—Insect Identification. 1 hour, and 4 hours laboratory. 3 credits. Prerequisite or corequisite: EY. 203, or EY. 307, and EY. 408. Offered 2, 3.

A survey of immatures and adults of all orders. Identification of insects of all major families. Textbooks, "Introduction to Entomology," by Comstock, and "How to Know the Immature Insects," by Chu.

EY. 462.—Insect Ecology. 1 hour, and 2 hours laboratory. 2 credits. Prerequisite or corequisite: EY. 203, or EY. 307, and EY. 408. Offered 2.

The basic principles of animal ecology as they apply to insect life.

EY. 464.—Biological and Natural Control. 1 hour, and 2 hours laboratory. 2 credits. Prerequisite or corequisite: EY. 203, or EY. 307, EY. 408, and EY. 460. Offered 1.

The fundamental principles involved in the natural and biological control of insects.

EY. 470.—The Experimental Method. 1 hour, and 2 hours laboratory. 2 credits. Prerequisite or corequisite: EY. 203, or EY. 307. Offered 2, odd years.

Broad training in the experimental methods employed in the various phases of entomology. Textbook, "A Manual of Entomological Equipment and Methods" (Parts I and II), by Peterson.

EY. 480.—The History of Entomology. 1 hour. 1 credit. Prerequisite or corequisite: EY. 203, or EY. 307. Offered 2, even years.

The major historical aspects of the field of entomology. Textbook, "Fragments of Entomological History," by Osborn.

EY. 490.—Structural Pest Control. 1 hour, and 2 hours laboratory. 2 credits. Prerequisite or corequisite: EY. 203, or EY. 307. Offered 2, odd years.

The major pests encountered by the commercial pest control operator, including life history studies, and chemical and mechanical methods of control. Textbook, "Manual of Structural Pest Control," by Creighton.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EY. 492.—Advanced Economic Entomology. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite or corequisite: EY. 203, or EY. 307. Offered 2, 3, even years.

An advanced study of economic entomology which considers in detail the biology, life history, and control of the major insect species affecting the economic plants and animals of Florida. Particular stress is placed upon the recognition of the most economic species and their damage which affect field crops, deciduous fruits, and grasses. Textbook, "Destructive and Useful Insects," by Metcalf, Flint and Metcalf.

EY. 494.—Insecticidal Formulations. 1 hour, and 3 hours laboratory. 2 credits. Prerequisites: EY. 203, or EY. 307 and EY. 405. Offered 2, even years.

A study of the source and cost of raw materials. Development of formulae, and the preparation of large batch quantities on laboratory and pilot plant scale. The formulation of the raw materials into wettable powders, solutions, emulsions, aerosols, and dusts. The course includes consideration of the laws governing manufacture, labeling and sale of insecticides.

GRADUATE COURSES

Prerequisite: A Bachelor of Science degree or its equivalent. The student should have thirty semester hours in the biological sciences, with twelve or more hours in the field of entomology. Should he be deficient in this respect, the student will be expected to fulfill these requirements during the time that he is pursuing work that will lead to the advanced degree. This work will be taken as foundation work with no graduate credit.

EY. 601.—Methods of Research in Entomology. 3 hours. 3 credits. Offered 2.

Special laboratory, insectary, and field methods in research dealing with the several phases of entomology. A study of the leading research problems of the state and nation, with careful consideration of the more complicated ones. Research problem required.

EY. 603.—Problems in Entomology. 4-8 hours. 2-4 credits. Offered 1, 2, 3.

A problem for study which may be selected in any field of entomological specialization, including histology, morphology, physiology, taxonomy, embryology, biological control, ecology, toxicology, plant quarantine, commercial entomology, life history and habits, biology, and medical and veterinary entomology.

EY. 607.—Advanced Insect Taxonomy. 1 hour, and 6 hours laboratory. 3 credits. Prerequisites: EY. 408, EY. 460, and EY. 608. Offered 1.

An advanced study of the various systems of classification, the basis of systematic entomology, and rules of nomenclature. Practice in the identification of immature and adult insects in the field and in the laboratory.

EY. 608.—Comparative Insect Morphology and Physiology. 1 hour and 6 hours laboratory. 3 credits. Prerequisite: EY. 408. Offered 2.

A comparative study of the external and internal anatomy and physiology of representative insects found in each insect order.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

EY. 610.—Insect Embryology. 1 hour, and 6 hours laboratory. 3 credits. Prerequisite: EY. 408. Offered 1.

The principles of insect embryology. Textbook, "Embryology of Insects and Myriapods," by Johannsen.

EY. 615.—Advanced Biological and Natural Control. 1 hour, and 6 hours laboratory. 3 credits. Prerequisites: EY. 408, EY. 460, EY. 462, and EY. 464. Offered 1.

The fundamental principles of natural and biological control, including basis of control; resistant hosts; function of bacteria, fungi, viruses and protozoa; use of parasitic invertebrate animals; special emphasis upon hexapods of value in natural and biological control; and cases where such control has been of great value in control of economic species.

EY. 616.—Advanced Insect Ecology. 1 hour, and 6 hours laboratory. 3 credits. Prerequisites: EY. 408, EY. 460, and EY. 462. Offered 2.

Ecological principles and their application to insect life in which the economic applications are stressed. Research problem required.

EY. 617.—Principles of Insect Pathology. 2 hours, and 3 hours laboratory. 3 credits. Prerequisites: EY. 408, EY. 464, BCY. 300. Offered 1.

A study of the diseases of insects which are caused by bacteria, fungi, viruses, protozoa, nematodes, and nutritional disturbances.

EY. 618.—Chemistry and Toxicology of Insecticides. 1 hour, and 6 hours laboratory. 3 credits. Prerequisites: CY. 121-122 or CY. 109-110, EY. 405. Offered 2.

A study of the chemistry of insecticides and their toxicity to insects.

EY. 620.—Advanced Medical Entomology. 1 hour, and 6 hours laboratory. 3 credits. Prerequisites: EY. 408, EY. 420, EY. 460. Offered 1.

An advanced study of the insects affecting the health and comfort of man.

EY. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

Field or laboratory research of entomology problems. Results to be used in preparation of thesis.

FAMILY LIFE

Instructional Staff 1956-57

Rockwood, C. A., Head; McKinney, G. C., Ronaldson, A. S., Wilkes, J. A.

Students who offer Family Life as a component part of a group major must have the approval of the Departmental advisor for the combination of courses taken in this area.

FAM. 111.—Personal Development. 2 hours. 2 credits. Offered 1, 2.

The development of personal assets through an analysis of contributing factors; the behavior of self and others; qualities of effective personalities. The individual a family member.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

FAM. 150.—Nutritive Requirements for Health. 2 hours. 2 credits. Offered 2.

Nutrition sources: Proteins, carbohydrates, fats, vitamins, and mineral elements. Metabolism and signs of nutritional deficiency. Emphasis upon construction of adequate diets for family members at different ages and under varying conditions.

FAM. 204.—Home Equipment. 2 hours and 2 hours laboratory. 3 credits. Prerequisite: C-21. Offered 2.

Laws and principles of physics as they apply to the home. Consideration of these principles in the selection, care and use of home equipment and appliances.

FAM. 209.—(Identical with AE. 209).—Housing for Families. 3 hours. 3 credits. Offered 2.

Problems in securing adequate housing for the family. Consideration of physical, social, economic, and other factors involved.

FAM. 210.—Organization and Management of the Home. 3 hours. 3 credits. Offered 2.

Management in family living; use of time, energy, money, and materials in the home. Human relationships will be emphasized.

FAM. 213.—The Child in the Home. 2 hours and 2 hours laboratory. 3 credits. Offered 1, 2.

A study of the child in relation to his home. Consideration of the responsibilities of parenthood. Factors affecting development. Emphasis upon the pre-school child. Observation and participation in the department's Child Study Center.

FAM. 301.—Family Relationships. 3 hours. 3 credits. Prerequisites: SY. 244 or PSY. 201 with permission of instructor. Offered 1, 2.

Personal and family relationships; guidance of the student in establishing successful family life patterns.

FAM. 400.—Seminar in Family Life. 3 hours. 3 credits. Prerequisites: FAM. 301, PSY. 308. Offered 2.

A coordination and integration of the student's work in the major program.

FAM. 430.—Individual Work. 3 credits. Prerequisites: Fam 301 and permission of Head of Department. Offered 1 and 2.

With a change of content FAM. 430 may be selected for additional credits. To meet needs of students in areas not covered in regular course offerings.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

FOOD TECHNOLOGY AND NUTRITION

Instructional Staff 1956-57

Dennison, R. A., Head; Hall, C. B., Showalter, R. K., Van Middelem, C. H., Vilece, R. J., Wenzel, F. W.

FT. 230.—Food Preservation. 1 hour, and 4 hours laboratory. 3 credits. Prerequisite: CY. 109-110 or CY. 121-122. Offered 1.

Principles of fruit and vegetable preservation, with special emphasis on canning and freezing processes. Primarily for students in Vocational Agriculture. Textbook: Cruess, "Commercial Fruit and Vegetable Products".

FT. 301.—Food Technology. 1 hour, and 4 hours laboratory. 3 credits. The first half of FT. 301-302. Prerequisites: CY. 109-110 or CY. 121-122, or permission of instructor. Not open to students who have had FT. 201. Offered 1.

A study of all phases of the processing of fruits, other than citrus, and vegetables by canning, freezing, and dehydrating, and of the products and by-products of this processing. In the first half of the course, attention is given mainly to the manufacture of jams, jellies, and confections and of pickled, spiced and fermented products, and to the inspection and scoring of commercially processed foods. Textbook: Cruess, "Commercial Fruit and Vegetable Products".

FT. 302.—Food Technology. 1 hour, and 4 hours laboratory. 3 credits. The second half of FT. 301-302. Prerequisite: FT. 301. Offered 2.

In this half of the course, attention is given chiefly to canning, freezing and dehydration of fruits, other than citrus, vegetables, and their juices. Textbook: Same as FT. 301.

FT. 332.—Food Examination. 1 hour, and 4 hours laboratory. Prerequisites: CY. 121-122, ACY. 208 or CY. 331. Offered 1.

The analysis of food materials for important ingredients; methods for determination of the composition, quality, and adulteration of foods; legal and sanitary aspects of food examination; and governmental sampling and grading of processed foods. Textbook: Jacobs, "Chemical Analysis of Foods and Food Products".

FT. 411.—Citrus Preservation. 1 hour, and 4 hours laboratory. 3 credits. Prerequisites: CY. 121-122 or CY. 217-218. Offered 1.

The application of current and potential methods to the preservation and utilization of citrus fruits, including frozen concentrate, canned and frozen products, jellies, candies, and by-products.

FT. 412.—Citrus Products Examination. 1 hour, and 4 hours laboratory. 3 credits. Prerequisite: CY. 331, or permission of instructor.

Methods for the examination of citrus products for significant characteristics and components with special emphasis on grading and quality control in the modern plant.

FT. 422.—Food Science Literature. 1 hour. 1 credit. Offered 2.

A survey of the principal publications in Food Science and closely related fields.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

FT. 499.—Special Problems in Food Technology and Nutrition. 2 to 6 hours. 1 to 3 credits. Offered 1, 2, 3.

Open to seniors on consent of instructor. Individual research work in various phases of food technology and nutrition.

GRADUATE COURSES

FT. 630.—Advanced Food Technology. 3 hours. 3 credits. Prerequisites: FT. 302, BCY. 403. Offered 1.

A detailed study of several important phases of food technology. Derivation of thermal processes, characteristics of food packaging materials, and technology of edible fats and oils will be covered.

FT. 670.—Non-thesis Research in Food Technology and Nutrition. 1 to 6 credits. Offered 1, 2, 3.

FT. 699.—Research and Master's Thesis. 0 to 6 credits.

FOREIGN LANGUAGE

Instructional Staff 1956-57

Brunet, J., Head; Aratowsky, B., Jones, O. F., Kurth, A. L., Segel, H. B., Marchand, H., Wershow, I. R.

FLE. 230.—Individual Work in Foreign Languages. 3 hours. 3 credits. Prerequisite: Permission of the head of the department.

By means of this course students may be permitted to elect the study of foreign languages for which there are no regular course offerings, such as Czech, Hungarian, Italian, Polish, Portuguese, Turkish and the modern Scandinavian languages. Assurance of a sustained sequence in any of these languages cannot be given.

FLE. 351.—Comparative Study of Foreign Languages. 3 hours. 3 credits. Prerequisite: Four semesters of Foreign language study in college, or the equivalent. Offered 1. The first half of the course FLE. 351-352.

The history, materials and methods of Indo-European philology. Basic principles and problems of comparative grammar, illustrated by examples drawn from the major European languages taught at the University of Florida. Required of all majors in foreign languages.

FLE. 352.—Comparative Study of Foreign Languages. 3 hours. 3 credits. Prerequisite: FLE. 351, or the equivalent. Offered 2.

Survey of the history and development of the principal groups in the Indo-European family of languages, and of the principal representatives of each group. The basic description and history of each language and of each group, and the present function and importance of each. Required of all majors in foreign languages.

FLE. 619.—Comparative Grammar of the Romance Languages. 3 hours. 3 credits.

Comparative study of the phonology and morphology of French, Italian, Spanish, Portuguese and Rumanian, with some reference to the minor Romance languages.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

FLE. 620.—Comparative Grammar of the Romance Languages. 3 hours. 3 credits.

Comparative study of the syntax of French, Italian, Spanish, Portuguese and Rumanian, with some reference to the minor Romance languages.

FLE. 750.—Special Study in Foreign Languages and Literatures. 3 hours. 3 credits. For Ph.D. candidates.

Provides study in supporting areas in Romance Languages other than the major. With different content duplicate registration is permitted.

FORESTRY

Instructional Staff 1956-57

Kaufman, C. M., Director; Barnes, R. L., Beckwith, S. L., Frazer, P. W., Geltz, C. G., Herndon, T. G., Huffman, J. B., Miller, J. W., Jr., Perry, T. O., Post, D. M., Smith, R. B., Swinford, K. R., Wang, Chi Wu, Willingham, J. W., Woodrum, W. B.

FY. 220.—Introduction to Forestry. 2 hours. 2 credits. Offered 1, 2, 3.

Fundamental underlying principles of the field of Forestry.

FY. 221.—Summer Camp. 5 credits. Offered 3.

Summer Camp work covers the entire field of forestry. Students receive field training by doing surveying, cruising, silviculture, mensuration, and forest management work.

FY. 226.—Dendrology. 1 hour, and 3 hours laboratory and field work. 2 credits. Prerequisites: BTY. 101-102. Offered 1.

Classification and distinguishing characteristics of commercially important forest tree species of the United States, including their size, form, habitat and range. Laboratory and field identification.

FY. 227.—Dendrology. 1 hour, and 3 hours laboratory and field work. 2 credits. The second half of the course FY. 226-227. Offered 2.

FY. 228.—Forest Mensuration. 2 hours, and 3 hours field. 3 credits. Prerequisite: MS. 105. Offered 3. (Given at Summer Camp).

Principles and practice of measuring forests and forest products with special attention to Florida conditions.

FY. 229.—Forest Mensuration. 1 hour, and 4 hours field. 3 credits. Prerequisite: FY. 228. The second half of the course FY. 228-229. Offered 1.

FY. 301.—Silvics, I. 2 hours, and 4 hours laboratory. 3 credits, Prerequisites: BTY. 101-102. Offered 1.

The biological aspects of tree growth, including the hereditary properties, the physiological functions and the reaction and adaptations to the environment.

FY. 302.—Silvics, II. 2 hours, and 4 hours laboratory. 3 credits. The second half of the course FY. 301-302. Offered 2.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

FY. 306.—Forest Protection and Improvements. 2 hours and 4 hours field. 3 credits. Offered 1.

Technique of protecting forests from fire with special emphasis on the southern states; roads, trails, structures, and other improvements necessary for adequate fire protection and forest management.

FY. 309.—Wood Technology. 2 hours, 3 hours in laboratory. 3 credits. Prerequisites: FY. 226 and 227. Offered 2.

Identification of the commercial timbers of the United States by appearance and structure as apparent under the hand lens; microscopic structure and non-chemical physical properties of wood, effects of moisture on strength and dimensions.

FY. 310.—Reforestation and Nursery Practice. 2 hours, and 4 hours laboratory. 3 credits. Offered 2.

Seed collection and preparation, germination tests, nursery planting and management, field planting.

FY. 313.—Farm Forestry. 2 hours, and 2 hours laboratory. 3 credits. Non-credit for forestry majors. Offered 1, 2.

Farm forests in the farm management plan; economic and other values of farm forests; methods of growing and protecting farm forests; measuring and marketing farm forests products; wood preservation. Florida conditions.

FY. 318.—Forest Utilization and Products. 3 hours. 3 credits. Offered 1.

Rough forest products, poles, piling, posts, crossties, mine timbers, wood containers, furniture, veneer and plywood, pulp, paper and fiberboard, rayon and other chemically derived products, naval stores and other miscellaneous forest products.

FY. 319.—Advanced Wood Technology. 2 hours, and 2 hours laboratory. 3 credits. Offered 1.

A continuation of the study of wood identification with additional material on wood anatomy and the physical and chemical properties of wood.

FY. 351.—Forest Conservation. 3 hours. 3 credits. Non-credit for forestry majors. Offered 3.

Brief history of the forest conservation movement in the United States, with particular emphasis on the southern states and Florida, including the work of several states, various agencies of the federal government, private associations and individuals.

FY. 353.—Principles of Wildlife Management. 3 hours. 3 credits. Offered 1.

The basic principles and concepts of wildlife as a crop, its increase, conservation and management, inclusive of game birds, fish and mammals.

FY. 354.—Techniques in Wildlife Management. 1 hour, and 6 hours of laboratory or fieldwork. 3 credits. Prerequisite: FY. 353. Offered 2.

The study and practice of field and laboratory techniques essential to the management of wildlife populations.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

FY. 401.—Silviculture. 2 hours, and 4 hours field and laboratory. 3 credits. Prerequisites: FY. 301-302. Offered 1.

Factors influencing natural and artificial regeneration; methods of cutting to secure regeneration; planting for artificial regeneration; methods of cutting for stand improvement; slash disposal; preparation of silvicultural plans.

FY. 409.—Forest Finance. 3 hours. 3 credits. Offered 2.

Forests as investments, interest rates, carrying charges, maturity, relation of intermediate to final and net incomes, and forest insurance.

FY. 410.—Forest History and Policy. 2 hours. 2 credits. Open to seniors only.

History of forest land use in the United States. Development of conservation agencies and study of federal and state laws affecting forests.

FY. 412.—Seminar. 1 hour. 1 credit. Offered 1.

Round-table discussion of the trends, developments, problems, etc., that are found in forestry from time to time.

FY. 413.—Regional Silviculture. 3 hours. 3 credits. Prerequisites: FY. 301-302. Offered 1.

The ecological and economic factors that influence silvicultural practice, and the application of silvicultural methods to the forests of the United States and Alaska.

FY. 414.—Wood Preservation. 1 hour, and 3 hours laboratory. 2 credits. Prerequisite: FY. 309. Offered 2.

Decay, preservation, treating plants and apparatus, methods and costs, objects treated and results, fire proofing, painting and finishing woods.

FY. 415.—Timber Mechanics and Testing. 2 hours, and 3 hours laboratory. 3 credits. Prerequisites: FY. 309 and MS. 105-106. Offered 2.

Wood-testing methods and test constants; basic principles involved in analysis of timber and plywood structures; basic design of timber and plywood structures.

FY. 416.—Applied Forest Management. 1 hour, and 5 hours field. 3 credits. Prerequisite: FY. 419. Offered 2.

Application of the principles of forest management; working plans for stand regulation and measures for sustained yield, forest operation and administrative practice.

FY. 418.—Logging and Lumbering. 3 hours. 3 credits. Offered 2.

Utilization of major forest products; logging engineering, transportation, equipment, costs, lumber manufacture, plant, milling practice, and merchandising of products.

FY. 419.—Principles of Forest Management. 2 hours and 4 hours field. 3 credits. Prerequisite: FY. 229. Offered 1.

Principles of forest management, forest organization, management plans, subdivisions of forest area, forest regulation, cutting cycle, normal forest.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

FY. 420.—Forest Economics and Administration. 3 hours. 3 credits. Offered 2.

A world survey of forest resources; land economics as applied to forestry; supply, demand, price trends and forest net income, forest taxation, public and private forest administration.

FY. 421.—Kiln and Air Drying of Lumber. 1 hour, and 4 hours laboratory. 3 credits. Prerequisite: FY. 309. Offered 1, 2.

Principles and practices of wood storage, stacking, air seasoning, kiln drying and schedules, temperature and moisture relations.

FY. 431.—Forest Problems Seminar. Lectures, field and laboratory work arranged. Variable credit. Offered 1, 2, 3.

Discussion of and investigation in some particular field of forestry or wildlife management. The student will be assigned to the member of the staff in whose field his interest lies.

FY. 434.—Applied Wildlife Management. 1 hour, and 5 hours of field work. 3 credits. Prerequisite: FY. 354. Offered 1.

The application of wildlife management techniques to the production of annual crops of wildlife.

FY. 435.—Applied Wildlife Management. 1 hour, and 5 hours field. 3 credits. Prerequisite: FY. 434. Offered 2. A continuation of FY. 434.

The application of wildlife management techniques for the production of annual crops of wildlife.

FY. 436.—Waterfowl Management. 2 hours, and 3 hours laboratory or field work. 3 credits. Prerequisites: FY. 353 and approval of instructor. Graduate major credit. Offered 1.

The principles and problems concerned with the conservation and management of waterfowl populations.

FY. 443.—Forest Statistics. 1 hour, and 4 hours laboratory. 3 credits. Prerequisite: FY. 229. Offered 1.

Study of statistical procedures applicable to forest investigations. Problems and practice computations illustrating principles of experimental design and the reduction of experimental data.

FY. 446.—Forest Photogrammetry. 1 hour, and 5 hours field. 3 credits. Prerequisites: FY. 229. Offered 1.

Study of those principles of aerial photogrammetry applicable to forest land management. Practical experience in the use of photo interpretation and mapping equipment and in the application of approved methods and procedures.

FY. 447.—Logging Practice. 8 hours field. 3 credits. Prerequisites: FY. 418 and permission of the instructor. Offered 1, 2.

Sharpening axes and saws, welding and brazing, cable splicing, maintenance and operation of Diesel equipment; felling and bucking trees; skidding and loading logs; logging roads and facilities.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

FY. 448.—Milling Practice. 8 hours field. 3 credits. Prerequisites: FY. 418 and permission of the instructor. Offered 1, 2.

Operating and maintaining a sawmill, including checking alignment of the mill, calculation of cut, sawing practices for maximum yield and quality.

FY. 449.—Log and Lumber Grades. 1 hour lecture. 4 hours laboratory. 3 credits. Prerequisites. FY. 229. Offered 2.

Need for standard specifications; log grades and grading; lumber grades and grading for common, dimensional and structural timbers, sizes and lengths, moisture content specifications.

FY. 453.—Timbers of the Caribbean Region. 3 credits. Prerequisite: FY. 309. Offered 1.

Identification, geographical distribution, anatomical and mechanical properties and uses of the more important commercial timbers of the Caribbean region.

FY. 459.—Microtechnique of Wood Tissues. 1 hour, and 6 hours laboratory. 3 credits. Prerequisite: FY. 309. Offered 2.

Microtechnique methods peculiar to the sectioning, staining and mounting of woody materials for microscopic examination and identification.

GRADUATE COURSES

FY. 601.—Research Methods in Silviculture. 3 hours. 3 credits. Offered 1.

A survey of field and laboratory methods used in research and in silvics and silviculture. A review of the research programs of federal and state experiment stations.

FY. 602.—Research Problems in Silviculture. 3 to 6 credits. Offered 1, 2, 3.

Individual research on a specific problem in silvics, forest tree seed, propagation, forest soils, forest ecology (including phenology), and practice of silviculture.

FY. 603.—Research Problems in Wood Utilization. 3 to 6 credits. Offered 1, 2, 3.

Individual research in wood technology, wood preservation, naval stores, small sawmill operation, or pulpwood production.

FY. 604.—Research Problems in Forest Economics and Management. 3 to 6 credits. Offered 1, 2, 3.

Individual research in forest economics, forest finance, or forest management.

FY. 605.—Research Methods in Wildlife Management. 2 hours, and 3 hours of laboratory or field work. 3 credits. Offered 1, 3.

A detailed study of field and laboratory procedures used in wildlife research.

FY. 606.—Research Problems in Wildlife Management. Variable amount of lecture and laboratory or field work. 3 to 6 credits. Offered 1, 2, 3.

Individual research on specific problems in the field of wildlife management.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

FY. 613.—Advanced Forest Soils. 1 hour, and 8 hours laboratory. 3 credits. Prerequisites: SLS. 300, FY. 301-302, FY. 443.

A study of the characteristics of forest soils, their effect on forest growth, and importance in forest management. Particular attention is given to variation in soil type as related to tree growth and to soil characteristics of greatest significance in determining site quality for various tree species.

FY. 626.—Forest Genetics. 2 hours, and 4 hours laboratory. 3 credits. Prerequisite: An acceptable background in genetics. Offered 1.

The application of the principles of gentics to forestry. Extensive application in the silvicultural handling of forest stands is stressed, together with selection, hybridization and tree breeding techniques.

FY. 627.—Forest Genetics. 2 hours, and 4 hours laboratory. 3 credits. The second half of the course FY. 626-627. Offered 2.

Both semesters of this course must be satisfactorily completed before credit can be received for either part.

FY. 631.—Advanced Wood Preservation. 1 hour, and 8 hours laboratory. 3 credits. Prerequisites: FY. 414, PT. 325. Offered 2.

Technical aspects of the relationship between wood and wood-deteriorating agencies; evaluation and analysis of preservatives; investigation of factors involved in treating wood; evaluation of treating results and principles for conducting service tests.

FY. 651.—Timber Physics and Chemistry. 3 hours. 3 credits. Prerequisites: FY. 415 and Organic Chemistry. Offered 1.

The physical reaction of wood to moisture changes, heat, sound, electricty; the electrical theory of bonding; a study of the chemical properties and reaction of cellulose, lignin, extractives and infiltrates found in wood.

FY. 652.—Timbers of the World. 1 hour, and 6 hours laboratory. 3 credits. Prerequisite: FY. 309. Offered 1.

The identification, properties, and uses of the important commercial timbers produced outside the continental United States and Canada.

FY. 653.—Timbers of the World. 1 hour. and 6 hours laboratory. 3 credits. The second half of the course FY. 652-653. Offered 2.

FY. 680.—Advanced Forest Economics. 3 hours. 3 credits. Prerequisite: FY. 420 or equivalent. Offered 1.

A detailed consideration and analysis of the economics and economic problems of forestry and forest industries. Major emphasis is placed on the forest economy of the United States.

FY. 681.—Advanced Forest Economics. 3 hours. 3 credits. The second half of the course FY. 680-681. Offered 2.

FY. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

FRENCH

Instructional Staff 1956-57

Brunet, J., Head; Kurth, A. L., Wallace, M. J., Wennberg, B.

The undergraduate major must include FH. 305-306, FH. 307-308 and FH. 503-504, or the equivalent. In addition, it must also include as a subsidiary requirement FLE. 351, FLE. 352 and six semester hours of one or more foreign languages other than the major.

FH. 133.—First-Year French. 5 hours lecture and laboratory. 3 credits. Offered 1, 2.

FH. 134.—First-Year French. 5 hours lecture and laboratory. 3 credits. Prerequisite: FH. 133, or the equivalent. Offered 1, 2.

FH. 201.—Second-Year French. 5 hours lecture and laboratory. 3 credits. Prerequisite: FH. 134, or the equivalent. Conducted in French. Offered 1, 2.

FH. 202.—Second-Year French. 5 hours lecture and laboratory. 3 credits. Prerequisite: FH. 201, or the equivalent. Conducted in French. Offered 1, 2.

FH. 305.—French Composition and Conversation. 3 hours. 3 credits. Prerequisite: FH. 202, or the equivalent. Conducted in French. Offered 1.

FH. 306.—French Composition and Conversation. 3 hours. 3 credits. Prerequisite: FH. 202, or the equivalent. Conducted in French. Offered 2.

FH. 307.—Introductory Readings in French Literature and Civilization. 3 hours. 3 credits. Prerequisite: FH. 202, or the equivalent. Conducted in French. Offered 1.

FH. 308.—Introductory Readings in French Literature and Civilization. 3 hours. 3 credits. Prerequisite: FH. 202, or the equivalent. Conducted in French. Offered 2.

FH. 430.—Individual Work. 3 hours. 3 credits. Prerequisite: 18 hours of college French or the equivalent, and permission of the department head. Offered 1, 2.

Readings, conferences and reports. By means of this course, advanced students may study phases of French literature, language and civilization for which there are no special course offerings. With change of content, FH. 430 may be elected for additional credit in subsequent sessions.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

FH. 503.—The French Novel. 3 hours. 3 credits. Prerequisites: FH. 305-306 and FH. 307-308, or the equivalent. Conducted in French. Offered 1.

FH. 504.—French Tragedy, Comedy and Drama. 3 hours. 3 credits. Prerequisites: FH. 305-306 and FH. 307-308, or the equivalent. Conducted in French. Offered 2.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

FH. 550.—Special Study in French. 3 hours. 3 credits. Prerequisites: FH. 305-306, FH. 307-308 and FH. 503-504, or the equivalent. Conducted in French.

Each time it is offered, this course is announced in the schedule of courses with one of the following topics specified: Advanced Composition and Conversation; Explanation of Texts; Materials and Methods in the Teaching of French; French Pronunciation. With change of content, FH. 550 may be elected for additional credit in subsequent sessions.

COURSES FOR GRADUATES

Prerequisite: Thirty semester hours, or the equivalent, of undergraduate work in French, which must include FH. 305-306, FH. 307-308 and FH. 503-504 or the equivalent. In addition, a reading knowledge of a foreign language other than French is required.

FH. 600.—Special Study in French Literature. 3 hours. 3 credits. Offered 1, 2.

The study of genres and literary movements. Each time it is offered, the course is announced in the schedule of courses with a special subject in French literature, such as one of the following specified: Drama 1100-1800, Drama 1800-1900; the Novel, 1500-1800; The Novel 1800-1900; Poetry; Literary Criticism; Historians; Philosophical Writers; Classicism; Romanticism; Realism and Naturalism; Contemporary Literature. With change of content, FH. 600 may be elected for additional credit in subsequent sessions.

FH. 610.—Great Masters of French Literature. 3 hours. 3 credits.

Study of the life and works of the great writers of France. Each time it is offered, the course is announced in the schedule of courses with the name of the author studied. With change of content, FH. 610 may be elected for additional credit in subsequent sessions.

FH. 617.—Old French. 3 hours. 3 credits.

A study of the phonology, morphology and syntax of Old French.

FH. 618.—Old French. 3 hours. 3 credits.

The reading of selected monuments of literature from the beginning to 1500.

FH. 630.—Individual Work. 3 hours. 3 credits. Offered 1, 2.

Readings, conferences and reports. By means of this course, graduate students may study phases of French literature, language and civilization for which there are no special course offerings. With change of content, FH. 630 may be elected for additional credits in subsequent sessions.

FH. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

FRUIT CROPS

Instructional Staff 1956-57

J. W. Sites, Head; Ford, H. W., Ledin, R. B., Leonard, C. D., Reitz, H. J., Sharpe, R. H., Shoemaker, J. S., Soule, M. J., Jr., Stewart, I., Wolfe, H. S., Ziegler, L. W.

FC. 201.—Principles of Horticulture. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite: BTY. 101-102 or C-6. Required of all fruit crop majors. Offered 1, 2, 3.

Home and commercial production of fruits, vegetables and flowers. Both for students not expecting to major in fruit crops and as an introductory course for fruit crops majors which should be taken in the sophomore year. Textbook: Schilletter and Richey, *Textbook of General Horticulture.*

FC. 335.—Introduction to Citrus Culture. 2 hours. 2 credits. Prerequisite: FC. 201. Offered 1.

History, botany, and varieties of citrus; soil and climatic requirements; commercial citrus areas; citrus markets. Designed to afford the student a proper foundation for specialized studies in citrus.

FC. 336.—The Citrus Nursery and Young Grove. 2 hours, and 2 hour laboratory. 3 credits. Prerequisite: FC. 335. Offered 2.

A study of rootstocks, scion varieties, and propagational methods; bud-transmission problems; budwood and rootstock certification programs; handling the nursery and the grove in the first four years.

FC. 341.—Citrus Growing. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite: BTY. 101-102, or C-6. Offered 2, 3.

Citrus production and methods of culture designed to fill the need of the general student in agriculture. It is not to be taken for credit by production and research citrus majors, but is required of students majoring in Agricultural Education, Agricultural Engineering and citrus fruit packinghouse management and marketing majors.

FC. 403.—Physiology of Fruit Production. 3 hours. 3 credits. Prerequisites: BTY. 211, FC. 201, SLS. 302. Offered 1, 3.

Physiological principles underlying the production of fruit crops.

FC. 412.—Deciduous Fruits. 2 hours, and 2 hours laboratory. 3 credits. Prerequisites: FC. 201, SLS. 302. Offered 2.

Culture of peaches, pears, persimmons, grapes, and other deciduous fruits including the strawberry as grown in Florida. Textbook: Garris and Wolfe, *Southern Horticultural Management.*

FC. 423.—Major Tropical Fruits. 3 hours. 3 credits. Prerequisites: FC. 201, SLS. 301-302. Offered 1.

A study of the propagation, culture, and commercial production of the avocado, mango, and pineapple, with brief consideration of coffee, rubber and cacao. A field trip will be made.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

FC. 424.—Minor Subtropical and Tropical Fruits. 3 hours. 3 credits. Prerequisites: FC. 201, SLS. 301-302. Offered 2.

Studies of the culture and relationship of such fruits as the guavas, carissa, sapodilla, starapple, papaya, lychee, tamarind, etc. A field trip will be made.

FC. 435.—Citrus Culture. 2 hours, and 4 hours laboratory. 4 credits. The first half of the course FC. 435-436. Prerequisites: FC. 201, OH. 217, SLS. 301-302. Offered 1.

The growing of citrus fruits, including propagation, selection of site, planting, grove operations, harvesting, and varieties. A three-day field trip is required each semester. (This course, previously listed as HE. 435, will be offered for the last time in the fall of 1957 to take care of senior students who have been unable to take FC. 335 and 336.)

FC. 436.—Citrus Culture. 2 hours, 4 hours laboratory. 4 credits. The second half of the course FC. 435-436. Offered 2.

Textbook: *Hunger Signs in Crops.* (Previously listed as HE. 436, this course will be offered the last time in the spring semester in 1958 to take care of senior students who have been unable to take FC. 439 and 440.)

FC. 437.—Citrus Maturity and Packinghouse Procedure. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite or corequisite: FC. 435. Offered 1.

The maturity and grade factors affecting market quality of citrus fruits, the laws regulating the shipping or sale of citrus fruits, and the operation of commercial packinghouses.

FC. 438.—Citrus Packinghouse Management. 3 hours. 3 credits. Prerequisite FC. 437. Offered 2.

Appraisal of personnel and machinery factors, records, and costs of packinghouse operations. A one-day field trip is required.

FC. 439.—Citriculture. 2 hours, and 4 hours laboratory. 4 credits. The first half of the course FC. 439-440. Prerequisite: FC. 336. Offered 1.

The production of citrus fruits, including fertilization, irrigation, and cultivation. A three-day field trip is required each semester. To be offered for the first time in the fall of 1958.

FC. 440.—Citriculture. 2 hours, and 4 hours laboratory. 4 credits. The second half of course FC. 439-440. Offered 2.

Spray programs, pruning, frost protection, and grove rehabilitation. To be offered for the first time the spring of 1959.

FC. 499.—Special Problems in Fruit Crops. 2 to 6 hours. 1 to 3 credits.

Open to Fruit Crops seniors on consent of instructor. Individual research work in various phases of fruit crops.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

GRADUATE COURSES

Prerequisites: Twenty hours of satisfactory work in Fruit Crops and ten hours of satisfactory work in Botany, besides basic courses in Soils, Entomology, and Plant Pathology.

Through the cooperation of the Florida Agricultural Experiment Station and its branch stations, it is possible for thesis research in certain fields to be conducted at these stations. All thesis research for the Ph.D. will regularly be carried out at one of these stations.

FC. 603.—Fruit Crops Seminar. 1 hour. 1 credit. Offered 1, 2.

FC. 611.—Citrus Rootstocks and Scions. 2 hours, and 3 hours laboratory. 3 credits. Offered 1.

A critical study of rootstock-scion relationships in their influence on disease susceptibilities, soil and climatic adaptions, and quality and quantity of fruit production.

FC. 614.—Advanced Citriculture. 3 hours. 3 credits. Offered 1, 3.

An advanced course in citrus growing, emphasizing the problems offered by varying sites, soils, climates, stocks and varieties.

FC. 620.—Citrus Production Management. 2 hours, and 3 hours laboratory. 3 credits. Offered 2.

A course designed to study various methods of tabulating and evaluating the functions of citrus trees in relation to fruit production. Emphasis will be placed on actual field recognition of the various factors in production and the means of properly organizing field management for the problems involved.

FC. 650.—Projects in Citrus Production. 1 hour, and 6 hours field work. 3 credits per project. Maximum 12 credits. Prerequisites: FC. 341 or its equivalent and consent of instructor. Offered 2, 3.

Field work during second semester followed by classroom work in summer session. No credit until project is completed. Offered primarily to Agricultural Extension Workers and Vocational Agriculture Teachers. Each time it is offered, this course will be announced in the schedule of courses with one of the following projects specified: Stocks and Scions, Fertilization, Spray Schedules, or Maturity and Grade.

FC. 670.—Non-Thesis Research in Fruit Crops. 1 to 6 credits. Offered 1, 2, 3.

FC. 699.—Research and Master's Thesis. 0 to 6 credits. Offfered 1, 2, 3.

FC. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2, 3.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

GENERAL SCIENCE

Instructional Staff 1956-57

Ahrens, M. R., Head; Bingham, N. E., Powers, S. R.

GL. 301.—Elementary School Science. 4 hours. 3 credits. Satisfies certification requirement in the Elementary Course, Area II. Offered 1, 2, 3.

The role of science in the development of elementary school children. Experience with the content, materials, and approaches of elementary school science.

GL. 302.—Elementary School Science. 4 hours. 3 credits. Offered 2, 3.

A continuation of GL. 301 emphasizing field and laboratory work in the various areas of science.

GEOGRAPHY

Instructional Staff 1956-57

Diettrich, S. deR., Head; Crist, R. E., Cross, C. I., Day, R. L., Dunkle, J. R., Dyer, D. R., Pierson, W. H.

An undergraduate major in the College of Arts and Sciences consists of a minimum of twenty-four semester hours, including GPY. 200, 300, 323, 330, 382, and 481. Work in other departments which is required as a subsidiary to this major includes ES. 201 and GY. 203.

GPY. 200.—Introduction to Geography. 3 hours. 3 credits. Offered 1, 2.

A study of the relationships between population, human activities and the physical world.

GPY. 300.—Physical Geography. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite: C-21. Offered 1.

The earth considered as the environment of man. Elements of man's physical environment including land forms, climate, soils, vegetation, animal life, climatic regions and natural resources and the relation of their distribution to human affairs.

GPY. 305.—Geography of Florida. 3 hours. 3 credits. Offered 2.

The geographic conditions and human adjustments in the major regions of Florida. The distribution of population, routes of communication, industries, resources, and strategic location in their geographical and historical aspects; explanation and interpretation of major phenomena such as weather and climate, geologic structure and land forms, surface and underground drainage, shoreline characteristics, natural vegetation, soil types, and animal life. Optional field trips.

GPY. 323.—Elementary Climatology. 3 hours. 3 credits. Prerequisite:. GPY. 200 or GPY. 300.

The elements of climate, weather types and storms; classifications and distribution of climatic types; descriptive and explanatory analysis of the climates of the world.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

GPY. 330.—Maps, Charts and Graphs. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite: GPY. 200 or GPY. 300. Offered 2.

Elementary cartography and map interpretation; map projections; geographic and geologic symbols; methods of graphic presentation used in the different sciences, including block diagrams, structural diagrams, statistical maps, catrograms, slope, soil erosion and land utilization maps; field mapping and field techniques essential to the preparation and use of geographic and geologic maps.

GPY. 342.—Political Geography. 3 hours. 3 credits. Prerequisite: GPY. 200. Offered 1.

The concepts and axioms of political geography; geographic influences in the political development of the world; geopolitics; the major powers of the world.

GPY. 382.—(Identical with ES. 382).—Principles of Resource Utilization. 3 hours. 3 credits. Prerequisite: GPY. 200. Offered 1.

A comprehensive review of the natural and human resources of the United States followed by an intensive study of the wise and wasteful practices of exploitation and utilization of these resources. A study of the human and economic significance of the principles of conservation with special reference to the South. Course designated to satisfy resource certification for social studies teachers.

GPY. 430.—Individual Work. 3 hours. 3 credits. For undergraduates only. Prerequisite: 12 hours of Geography and consent of the instructor. Offered 1, 2.

Qualified students and the instructor concerned may choose a particular topic or problem for study. GPY. 430 may be repeated for full credit with change of content.

GPY. 481.—Geography of the United States and Canada. 3 hours. 3 credits. Prerequisite: GPY. 200. Offered 2.

A survey of the continent north from the Rio Grande with special reference to the natural resources of the United States. The analysis of the major regions of the United States and Canada.

GPY. 485.—Geography of South America. 3 hours. 3 credits. Prerequisite: GPY. 200. Offered 1.

A survey of the continent of South America, organized around the growth of trade, exports and imports, trade by countries, and general business trends; the economic conditions that influence commercial advance or decline; the major geographic regions; their importance in supplying export products and in consuming import commodities.

GPY. 486.—Geography of Caribbean America. 3 hours. 3 credits. Prerequisite: GPY. 200. Offered 2.

An economic geography course covering the West Indies, Mexico, Central America, Colombia, and Venezuela. The commercial importance of each republic and island as a market for American goods and as a source of raw materials and foodstuffs; Florida's commercial position in such trade.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

GPY. 490.—Field Course in Resource Utilization. 1 hour class, 1 day field work per semester week. 3 credits. Prerequisite: ES./GPY. 382.

An integrated study of the problems of local resources and their use in a designated unit area, such as a county or a city. The course consists of a combination of classwork and fieldwork. Course to be offered either during the regular session, in which case the field work will consist of an appropriate number of weekend trips, or during the summer when it will operate as a continuous field trip in a selected area.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

GPY. 548.—Geography of the South. 3 hours. 3 credits. Prerequisite: GPY. 200 and permission of student's advisor.

The natural environment of the South in relation to the cultural, economic, and political conditions of the region, and to the nation as a whole, with special emphasis upon the problems of southern resources and their use; organized mainly on a regional basis.

GPY. 549.—Geography of Africa, Australia and Oceania. 3 hours. 3 credits. Prerequisite: GPY. 200 and permission of student's advisor.

The natural regions, resources, populations, economic activities, problems of settlement and colonization.

GPY. 586.—Economic Geography of the Far East. 3 hours. 3 credits. Prerequisite: GPY. 200 and permission of student's advisor.

The distribution of natural resources and their economic use in the Far East, covering India, China, Japan, and Southeastern Asia.

GPY. 587.—Economic Geography of Europe. 3 hours. 3 credits. Prerequisite: GPY. 200 and permission of student's advisor.

The characteristics and distribution of population and of economic activities in Europe as related to the natural resources of the continent; relationships to other parts of the world, especially North America.

GPY. 588.—Economic Geography of the USSR. 3 hours. 3 credits. Prerequisite: GPY. 200 and permission of student's advisor.

A geographic survey of the USSR organized around the economic development of the country, with special reference to the significance of the USSR in the economic and political problems of the modern world. A study of economic regions, resources, and potentialities.

GPY. 589.—Economic Geography of the Near East. 3 hours. 3 credits. Prerequisite: GPY. 200. Offered 1.

A geographic survey of Southwest Asia and Egypt organized around the economic development of the area, with special reference to the significance of the Near East in the economic and political problems of the modern world. A study of economic regions, resources and potentialities.

GPY. 591.—Land Tenure. 3 hours. 3 credits. Prerequisite: GPY. 382.

A world-wide study of systems of land tenure, with special attention to the geographic factors underlying their development. The effects of the various systems of land tenure upon land utilization and productivity.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

GPY. 595.—Travel Field Course. 6 credits. Prerequisite: GPY. 490 (or GPY. 600 or appropriate area course).

A travel course employing methods of geographic field work. Minimum thirty-six days of which not less than twenty-four are spent in the field. Available for graduate major credit.

GRADUATE COURSES

Prerequisites: Bachelor's degree with a major in geography or its equivalent. All candidates for a degree in geography are expected to take a field course and appropriate seminars.

No graduate major may be complete without adequate credits at the 600 level.

GPY. 600.—Field Course in Geography. 6 credits.

Methods of geographical field work. Observation, classification, interpretation, note taking, traversing and mapping of data. Areal analysis; land forms, climate, vegetation, soils, resources, settlement patterns and land use. Eighteen work days of which not less than twelve are field work. Required of all candidates for graduate degrees in geography.

GPY. 605.—Advanced Cartography. 3 hours. 3 credits. Offered 2.

Supervised training and practice in map compilation and drafting for the attainment of advanced skill in cartographic techniques.

GPY. 614.—Regional Climatology. 3 hours. 3 credits.

Intensive study of climatic conditions and controls in selected regions; microclimatology; applications in agriculture, industry, merchandising, transportation, medicine, and other fields.

GPY. 623.—Geography of World Agriculture. 3 hours. 3 credits.

World distribution of crops and domesticated animals in relation to natural and cultural conditions; discussion of problems of agriculture in terms of products, economic organization and agricultural regions; significance in world affairs.

GPY. 624.—Advanced Economic Geography. 3 hours. 3 credits. Offered 1.

A lecture and research course analyzing the geographic and economic factors affecting the industrial and commercial development of the leading countries of the world. Students will be required to make intensive individual studies of selected subjects.

GPY. 625.—The Geography of Underdeveloped Lands. 3 hours. 3 credits. Offered 2.

An intensive study of under-developed areas stressing the possibilities they offer a rapidly changing and increasingly crowded world.

GPY. 626.—Urban Geography. 3 hours. 3 credits. Offered 2.

A study of the influence of the geographic factors upon the localization of pattern of urban settlements; the situation and site factors; types of cities; urban transportation; functional areas of cities and their relationships to geographic factors. Geographic influences upon urban landscapes and building types with special reference to Florida. Occasional field trips in Gainesville and nearby cities.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

GPY. 630.—Individual Work. 3 hours. 3 credits. Offered 1, 2.

A reading or research course in such areas of Geography as are needed by graduate students. May be elected for full credit in subsequent sessions with change of content.

GPY. 632.—Advanced Political Geography. 3 hours. 3 credits.

Influence of geographic factors upon the political development of the world; concepts of political geography; theories of its leading exponents; discussion of leading powers.

GPY. 641.—Problems in Resource-Use. 3 hours. 3 credits.

Analysis of the nation's natural and human resources and study of selected problems in their use.

GPY. 642.—Land Utilization. 3 hours. 3 credits. Offered 1.

Theory and methods of land-use analysis, land classification, resource appraisal, and land-use planning, including field mapping and map interpretations.

GPY. 651.—Population Geography. 3 hours. 3 credits.

World-wide distribution of population; the areal distribution of populations in relation to the features of the environment in selected areas; problems of adjustment; population-supporting capacity.

GPY. 671.—Advanced Geography of Middle America. 3 hours. 3 credits. Offered 1.

The geography of Middle America, emphasizing the earth resources and population-supporting capacities of representative areas.

GPY. 672.—Advanced Geography of South America. 3 hours. 3 credits. Offered 2.

Directed research in selected problems in the geography of South America, emphasizing the earth resources and population-supporting capacities of representative areas.

GPY. 680.—Development of Geographic Thought. 3 hours. 3 credits. Offered 2.

Development of geographic knowledge and thought as illustrated by the writings of representative geographers and scientists in related fields; present geographic philosophies in the United States and abroad.

GPY. 682.—Seminar in Regional Geography. 3 hours. 3 credits. Prerequisite: Graduate status with a major or minor in geography. Offered 2.

Discussion and directed research in the geography of selected regions.

GPY. 683.—Seminar in Geographic Research. 3 hours. 3 credits. Prerequisite: Graduate status with a major or minor in geography. Offered 1.

Discussion, application and critical evaluation of methods of geographic research.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

GPY. 684.—Seminar on Geographic Problems in Latin America. 3 hours. 3 credits. Offered 1.

The intensive study and investigation of specific regional and topical problems in Latin American countries.

GPY. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2.

GPY. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2.

GEOLOGY

Instructional Staff 1956-57

Edwards, R. A., Head; Brooks, H. K., Pirkle, E. C., Rappenecker, C., Yoho, W. H.

Students planning to major in geology should consult with the departmental advisor as early as practicable.

Courses marked (*) do not give credit toward a major or group major in the College of Arts and Sciences, except by specific permission of the Head of the Department.

GY. 203.—Elements of Physical Geology. 2 hours, and 2 hours laboratory. 3 credits. Offered 1, 2.

A study of minerals and rocks and their formation, geological processes, land forms and their interpretation, and the applications of geological knowledge to human affairs.

GY. 204.—Elements of Historical Geology. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite: GY. 203. Offered 1, 2.

The geologic history of the earth including concepts of the origin, the major physical events, the evolutionary changes in the animal and plant life, and the distribution of surface features and economic resources.

***GY. 210.—Engineering Geology.** 2 hours, and 3 hours laboratory. 3 credits. Prerequisite: CY. 121 or CY. 217. Offered 1, 2.

The several fields of geology having significance in the location of engineering structures and installations; the identification of common minerals and rocks; the processes of weathering and erosion; structure; surface features and geologic history interpreted from topographic and geologic maps. For Civil Engineers.

GY. 308.—Elementary Crystallography and Mineralogy. 1 hour, and 4 hours laboratory. 3 credits. Offered 1.

Study of the crystal systems and the identification of rock forming and ore minerals by methods not involving the use of the microscope.

GY. 309.—Structural Geology. 3 hours. 3 credits. Prerequisite: GY. 203. Offered 1.

Structural features of the earth, their causes, recognition and interpretation, to include the mechanics of folding; faulting and other deformations of the outer shell of the earth.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

GY. 318.—Elementary Petrology. 1 hour, and 3 hours laboratory. 2 credits. Prerequisite: GY. 308. Offered 2.

Concepts of the origin of and practice in the identification of the more common igneous, sedimentary and metamorphic rocks from hand specimens.

GY. 321.—Invertebrate Paleontology. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite or corequisite: C-6 or the equivalent. Offered 2.

Characteristics and identification of important groups of invertebrate fossils and their use in the determination of the geological age of sedimentary rocks.

GY. 340.—Interpretation of Geologic Maps. 4 hours laboratory and field work. 2 credits. Prerequisite or corequisite: GY. 309. Offered 1.

Surface and subsurface geologic features as they represented on topographic and geologic maps.

GY. 350.—Ground Water Geology. 3 hours. 3 credits. Prerequisite: GY. 203 or equivalent. Offered 2.

General principles of ground water geology, origin, composition and geologic control of accumulation, migration and emergence. Some field trips to be arranged.

GY. 360.—The Geology and Mineral Resources of Florida. 2 hours, and 2 hours laboratory or field work. 3 credits. Prerequisite: GY. 204.

Geological history, stratigraphy, and mineral resources of the State.

***GY. 400.—Florida Geology for Teachers.** 2 hours, and 2 hours laboratory and field trips. 3 credits.

Principles of physical and historical geology as applied to the geology and mineral resources of Florida.

GY. 401.—Geology of North America. 3 hours. 3 credits. Prerequisite: GY. 204. Offered 2.

A detailed study of the physiographic regions and the geological structures of North America.

GY. 411.—Principles of Economic Geology. 3 hours. 3 credits. Prerequisite: GY. 308. Offered 2.

The origin of and geologic factors responsible for the location and accumulation of economic mineral deposits.

GY. 417.—Sedimentology and Stratigraphy. 3 hours. 3 credits. Prerequisites: GY. 204, 308.

Processes governing the accumulation of sedimentary deposits and the principles used in their stratigraphic correlation.

GY. 430.—Individual Work. 3 hours. 3 credits. Prerequisites: 12 hours of Geology and permission of Head of Department. Offered 1, 2.

For work in addition to that offered in regular course in physiography, mineralogy, petrology, paleontology, stratigraphy, sedimentology, and structural geology. With change in content GY. 430 may be elected for additional credit.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

GY. 500.—Advanced Studies in Geology. 3 hours. 3 credits.

Ideas concerning the formation of mountains, geosynclines and the permanency or drift of continents and their influence on the concepts of historical geology.

GY. 501.—Geomorphology. 3 hours. 3 credits. Prerequisite: GY. 401 or equivalent. Offered 1.

Principles of geomorphology. A study of the basic concepts of the development of land forms, particularly with respect to the interrelation of rock structure, the processes operating, and stage attained.

GY. 507.—Vertebrate Paleontology. (Identical with BLY. 507.) 3 hours and 3 hours laboratory and field work. 4 credits. Prerequisites: BLY. 209 and GY. 203.

The origin, distribution and methods of fossilization of vertebrates.

GY. 518.—Optical Mineralogy. 3 hours laboratory. 1 credit. Prerequisites: GY. 308 and GY. 318. Offered 2.

Use of the petrographic microscope in the recognition of mineral grains and rocks in thin section.

GRADUATE COURSES

Prerequisite: A Bachelor's degree with a major in Geology or its equivalent, including either a course in field methods or a summer field course. Sufficient courses in a related science to serve as a foundation work for a minor are recommended.

GY. 601.—Geomorphology of Southeastern United States. 3 hours. 3 credits. Prerequisite: GY. 501 or equivalent.

A detailed study of geomorphology of the Atlantic and Gulf Coastal Plain, including the Mississippi Flood Plain and Delta, the Piedmont, Crystalline and Folded Appalachians and Southern part of the Appalachian Plateau and adjacent areas.

GY. 621.—Advanced Stratigraphy and Paleontology. 2 hours and 3 hours laboratory. 3 credits.

Stratigraphic relationship and paleontological correlation with emphasis on the Coastal Plain formations.

GY. 622.—Micropaleontology. 1 hour and 6 hours laboratory. 3 credits.

The study of Foraminifera, Ostracoda and other microscopic fossils.

GY. 630.—Individual Work. 3 hours. 3 credits. Prerequisite: Graduate status and consent of instructor.

For work beyond that offered in the courses in geomorphology, stratigraphy, paleontology and sedimentology. With change of content GY. 630 may be elected for additional credit.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

GY. 650.—Ground Water Geology of Coastal Plain Province. 3 hours. 3 credits. Prerequisite: Permission of the instructor.

An investigation of the origin, occurrences, quality, quantity, methods of recovery and use of ground water in the Coastal Plain province with special reference to Florida and immediately adjoining states.

GY. 660.—Seminar. 3 hours. 3 credits.

Readings in special topics in geology with application to the Coastal Plain, including petroliferous areas, earth materials of economic importance and others.

GY. 699.—Research and Master's Thesis. 0 to 6 credits.

GERMAN

Instructional Staff 1956-57

Brunet, J., Head; Craps, J. E., Jones, O. F., Mauderli, M. O., Valk, M. E.

The undergraduate major must include GN. 305-306, GN. 307-308 and GN. 509-510, or the equivalent. In addition, it must also include, as a subsidiary requirement, FLE. 351, FLE. 352 and six semester hours of one or more foreign languages other than the major.

GN. 100.—The German Lied. 2 hours. 2 credits. Prerequisite: One year college German, or the equivalent. May not be counted towards a major.

Reading and interpretation of familiar songs in the Germanic concert repertoire.

GN. 133.—First-Year German. 5 hours lecture and laboratory. 3 credits. Offered 1, 2.

GN. 134.—First-Year German. 5 hours lecture and laboratory. 3 credits. Prerequisite: GN. 133, or the equivalent. Offered 1, 2.

GN. 201.—Second-Year German. 5 hours lecture and laboratory. 3 credits. Prerequisite: GN. 134, or the equivalent. Conducted in German. Offered 1, 2.

GN. 202.—Second-Year German. 5 hours lecture and laboratory. 3 credits. Prerequisite: GN. 201, or the equivalent. Conducted in German. Offered 1, 2.

GN. 250.—Scientific German. 3 hours. 3 credits. Prerequisite: GN. 202, or the equivalent.

GN. 305.—Composition and Conversation. 3 hours. 3 credits. Prerequisite: GN. 202, or the equivalent. Conducted in German. Offered 2.

GN. 306.—Composition and Conversation. 3 hours. 3 credits. Prerequisite: GN. 202, or the equivalent. Conducted in German. Offered 1.

GN. 307.—Introductory Readings in German. Literature and Civilization. 3 hours. 3 credits. Prerequisite: GN. 202, or the equivalent. Conducted in German. Offered 1.

Selections from Heyne, Keller, Meyer, Storm and Stifter.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

GN. 308.—Introductory Readings in German. Literature and Civilization. 3 hours. 3 credits. Prerequisite: GN 202, or the equivalent. Conducted in German. Offered 2.

Selections from Hauptmann, Schnitzler, Rilke, Kafka and Thomas Mann.

GN. 430.—Individual Work. 3 hours. 3 credits. Prerequisites: 18 hours of college German or the equivalent, and permission of the department head. Offered 1, 2.

Readings, conferences and reports. Advanced students may study phases of German literature, language and civilization for which there are no special course offerings. With change of content, GN. 430 may be elected for additional credit in subsequent sessions.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

GN. 509.—Studies in German Literature. 3 hours. 3 credits. Prerequisite: GN. 307-308, or the equivalent. Conducted in German.

Intensive study of selected masterpieces of modern German literature. Lessing, Goethe, Schiller.

GN. 510.—Studies in German Literature. 3 hours. 3 credits. Prerequisite: GN. 307-308, or the equivalent. Conducted in German.

Intensive study of selected masterpieces of modern German literature: Goethe, Schiller, Novalis, Kleist.

GN. 531.—History of the German Language. 2 hours. 2 credits. Prerequisites: GN. 305-306, GN. 307-308 and GN. 509-510, or the equivalent.

Phonological, morphological, syntactical and semantic changes, 750 A.D. to the present. Foreign and cultural influences on the language.

GN. 540.—German Drama of the Nineteenth Century. 3 hours. 3 credits. Prerequisites: GN. 305-306, GN. 307-308 and GN. 509-510, or the equivalent. Conducted in German.

GRADUATE COURSES

Prerequisite: Thirty semester hours, or the equivalent, of undergraduate work in German. These must include GN. 305-306, GN. 307-308 and GN. 509-510, or the equivalent. In addition, a reading knowledge of a foreign language other than German is required.

GN. 600.—Great Masters of German Literature. 3 hours. 3 credits.

Study of the life and works of the great writers of Germany. Each time it is offered the course is announced in the schedule of courses with the name of the author studied. With change of content, GN. 600 may be elected for additional credit in subsequent sessions.

GN. 601.—The German Classical Period. 3 hours. 3 credits.

GN. 602.—The German Classical Period. 3 hours. 3 credits.

GN. 603.—The Romantic Period. 3 hours. 3 credits.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

GN. 606.—Modern German Literature. 3 hours. 3 credits.

GN. 607.—German Lyric Poetry. 3 hours. 3 credits.

GN. 608.—German Lyric Poetry. 3 hours. 3 credits.

GN. 609.—Middle High German. 3 hours. 3 credits.

GN. 610.—Middle High German. 3 hours. 3 credits.

GN. 611.—German Literature, 1400-1740. 3 hours. 3 credits.

GN. 630.—Individual Work. 3 hours. 3 credits. Offered 1, 2.

Readings, conferences, and reports. By means of this course, students may study phases of German literature, language and civilization for which there are no special course offerings. With change of content, GN. 630 may be elected for additional credit in subsequent sessions.

GN. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2.

GREEK

Instructional Staff 1956-57

Brunet, J., Head; Aratowsky, B.

The undergraduate major must include GK. 111 and GK. 117, and six hours of composition and six hours of literature beyond GK. 202, or the equivalent. The major may be earned by repeated registrations for GK. 530, Individual Work. By the same means, a graduate minor may be earned. In addition, the major must include, as a subsidiary requirement, FLE. 351, FLE. 352 and six semester hours of one or more foreign languages other than the major.

GK. 105.—The Greek Element in English. 2 hours. 2 credits. Offered 2.

An intensive study of Greek words in all varieties of current English, including scientific vocabularies. Open to all students. No previous knowledge of Greek is required. May not be used for major credit in the College of Arts and Sciences.

GK. 111.—Greek Life and Letters: Classical Archaeology. 2 hours. 2 credits. No prerequisite. Offered 1.

Illustrated lectures on archaeology, introducing the processes of discovery and the methods by which the ancient and remote past has been revealed to modern man. The history of the major archaeological explorations in Mediterranean lands will be reviewed and the results evaluated and compared with extant literary information, notably Pausanias, Pliny the Elder, Vitruvius, Herodotus, and the Greek dramatists.

GK. 117.—Greek Life and Letters: The Greek Drama. 2 hours. 2 credits. No prerequisite. Offered 2.

The classical Greek theater. Archaeological remains of important theaters will be surveyed and selected plays of Aeschylus, Sophocles, Euripides, Aristophanes and Menander read in translation. Ancient commentators on the drama will be cited to give a complete picture of the Greek theater, both archaeological and literary.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

GK. 123.—Greek Life and Letters: Readings in History, Biography and Inscriptions. 2 hours. 2 credits.

An introduction to ancient historiography. Lectures, readings and reports. Knowledge of Greek not required except of students taking the course for major credit, who will do their readings in Greek.

GK. 133.—First-Year Greek. 3 hours. 3 credits. Offered 1.

GK. 134.—First-Year Greek. 3 hours. 3 credits. Prerequisite. GK. 133, or the equivalent. Offered 2.

GK. 201.—Second-Year Greek. 3 hours. 3 credits. Prerequisite: GK. 134, or the equivalent. Offered 1.

The translation of Plato's *Apology*. Grammar study.

GK. 202.—Second-Year Greek. 3 hours. 3 credits. Prerequisite: GK. 201, or the equivalent. Offered 2.

The translation of Plato's *Crito,* parts of the *Phaedo,* and selections from Xenophon's *Memorabilia*. Grammar study.

GK. 530.—Individual Work. 3 hours. 3 credits. Prerequisite: 12 hours of college Greek or the equivalent and permission of the department head. Offered 1, 2.

Readings, conferences and reports. Advanced students may study subjects in Greek literature, language and civilization for which there are no special course offerings. With change of content, GK. 530 may be elected for additional credit in subsequent sessions.

HISTORY

Instructional Staff 1956-57

Worcester, D. E.*, Head; Baringer, W. E., Bentley, G. R., Chalmers, D. M., Cox, M. G., Doherty, H. J., Doty, F. A., Dowd, D. L., Glunt, J. D., Groth, J. H., Hammond, E. A., Hanna, P. L., Harrison, J. A., McAlister, L. N., Mahon, J. K., Osborn, G. C., Patrick, R. W., Payne, A. N., Proctor, S., Svarlien, O., Thompson, A. W., Wilgus, A. C., Yearley, C. K.

A departmental major comprises a minimum of twenty-four hours. Although there are no rigid course requirements, students should proceed from general surveys to the detailed and specialized courses. A foreign language should be elected at least as early as the sophomore year. Students who plan to major in history should consult the student advisor of the Department.

HY. 151.—Florida History to 1860. 3 hours. 3 credits. Offered 1.

The Spanish discovery of, exploration in, and expansion from the Caribbean Islands; Spain in Southeastern North America; the imperial conflict for Florida; the British period; the Second Spanish period; the United States acquisition of the Floridas; the territorial period and the period of early statehood.

HY. 152.—Florida History, 1860 to the Present. 3 hours. 3 credits. Offered 2.

Florida during the Civil War and Reconstruction; the development of agriculture and industry, society and education; political reaction and the progressive era; the tourist trade, urbanization, and contemporary politics.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.
*On leave 1956-57.

HY. 201.—History of World Civilizations to 1550. 3 hours. 3 credits. Offered 1, 2.

Analysis of the civilization and cultures antecedent to the modern civilization of the Western World designed to give an understanding of the chronology, development and meaning of human history from its oriental origins thru Classical Antiquity, the Byzantine and Islamic traditions, Medieval and Renaissance Europe to the Protestant Reformation.

HY. 202.—History of World Civilizations, 1550 to the Present. 3 hours. 3 credits. Offered 1, 2.

The historical evolution of nationalism and the modern state; the global struggle for power; the spread of European science, technology, industrialism and imperialism throughout the world; the development of contemporary political, social and economic institutions and ideas. The central theme is the expansion of the influence of Western Europe, with some attention to the rise of the United States as a world power.

HY. 245—United States History to 1865. 3 hours. 3 credits. Offered 1, 2.

A survey of the political, economic, social and intellectual development of the people of the United States from the founding of Britain's colonies in North America through the American Civil War.

HY. 246.—United States History, 1865 to the Present. 3 hours. 3 credits. Offered 1, 2.

Reconstruction, the Age of Big Business, the United States as a world power, World War I, the great depression and the New Deal, World War II and its aftermath will be studied in an interpretative survey.

HY. 301.—The History of Modern Science. 3 hours. 3 credits. Offered 1.

The social and cultural origins of science, the growth and development of the major sciences, and their effect and influence upon society.

HY. 307.—Ancient Civilizations. 3 hours. 3 credits. Prerequisite: C-1 or equivalent and 6 additional hours of social sciences. Offered 1.

A study of the circumstances involved in the rise of the civilizations of the Ancient Orient and the Greek City States. Stress will be on the economic, political, cultural, ideological and religious factors which have a vital bearing on Western Civilization of the present day.

HY. 308.—Ancient Civilizations. 3 hours. 3 credits. Prerequisites: C-1 or equivalent and 6 additional hours of social sciences. Offered 2.

A study of the various aspects of Hellenism, the Roman Republic and the Roman Empire. Emphasis will be on the economic, political, cultural, ideological and religious factors which have a vital bearing on Western Civilization of the present day.

HY. 313.—The Early Middle Ages. 3 hours. 3 credits. Prerequisites: C-1 or equivalent and 6 additional hours of social sciences. Offered 1.

A survey of the origins of modern European civilization from the Roman Empire to the thirteenth century. Particular attention will be given to the development of Christianity, the classical heritage of the Middle Ages, the barbarian migrations, feudalism, and the crusades.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

HY. 314.—The Late Middle Ages. 3 hours. 3 credits. Prerequisites: C-1 or equivalent and 6 additional hours of social sciences. Offered 2.

A survey of the origins of Modern European Civilization in the thirteenth, fourteenth, and fifteenth centuries. Emphasis will be placed on the decline of the medieval church, the growth of a monetary and an urban economy, the rise of a middle class, and the main currents of medieval thought and letters.

HY. 325.—Recent Modern Europe, 1789 to 1870. 3 hours. 3 credits. Prerequisites: C-1 or equivalent and 6 additional hours of social sciences. Offered 1.

A survey of the recent background of contemporary Europe from the French Revolution to 1870. The impact of liberalism, nationalism and industrialism upon European political, social, economic and intellectual life and the impact of these on the rest of the world are stressed.

HY. 326.—Recent Modern Europe, 1870 to the Present. 3 hours. 3 credits. Prerequisites: C-1 or equivalent and 6 additional hours of social sciences. Offered 2.

A survey of contemporary Europe since 1870. The impact of conflicting ideologies, economic crises and wars upon European political, social, economic and intellectual life and the interdependence of Europe and the rest of the world are stressed.

HY. 333.—The History of Russia. 3 hours. 3 credits. Prerequisites: C-1 or equivalent and 6 additional hours of social sciences. Offered 1.

Description and analysis of the fundamental institutions of the Russian state and people from the Kieven state to the Crimean War. Stress is laid on the development of serfdom, the rise of the Tsardom, the expansion of the Russian frontiers and the creation and preservation of a medieval class structure.

HY. 334.—Modern Russia and the U.S.S.R. 3 hours. 3 credits. Prerequisites: C-1 or equivalent and 6 additional hours of social sciences. Offered 2.

Description and analysis of the breakdown of the medieval Russian state and the collapse of the Russian Empire. Stress is laid on the conflict between reaction and revolution; the state and the peasant; the expansion of the Russian frontiers; the emergence and structure of the Soviet State and the Comintern.

HY. 335.—English History to 1689. 3 hours. 3 credits. Prerequisites: C-1 or equivalent and 6 additional hours of social sciences. Offered 1.

A survey of English History from early times to the Glorious Revolution, with emphasis on Medieval England, the rise of the state, the Tudor and Stuart periods and the economic and political developments.

HY. 336.—English History, 1689 to the Present. 3 hours. 3 credits. Prerequisites: C-1 or equivalent and 6 additional hours of social sciences. Offered 2.

A survey of the political, economic and social changes from the Glorious Revolution to the present, with emphasis on the extension of English influence throughout the world in the eighteenth and nineteenth centuries.

The statement "Offered 1" means offered first semester; 2. second semester; 3. summer session.

HY. 371.—Colonial Latin-American History. 3 hours. 3 credits. Prerequisites: C-1 or equivalent and 6 additional hours of social sciences. Offered 1.

A survey of the discovery, exploration, settlement of Latin America; the colonial systems of Spain and Portugal; the economic, social, political, and cultural developments in the colonies; and the Wars of Independence.

HY. 372.—Modern Latin-American History. 3 hours. 3 credits. Prerequisites: C-1 or equivalent and 6 additional hours of social sciences. Offered 2.

A survey of Latin America from the Wars of Independence to the present, with particular attention to the fundamental political, economic, and cultural factors and to the increasing importance of Latin America in world affairs.

HY. 381.—The Far East. 3 hours. 3 credits. Prerequisite: C-1 or equivalent. Offered 1.

A survey of the civilizations and cultures of China, Japan and their borderlands from the earliest times to the 18th century including the expansion of the West into Siberia and India.

HY. 382.—The Far East. 3 hours. 3 credits. Prerequisite: C-1 or the equivalent. Offered 2.

A survey of the modern history of Eastern Asia.

HY. 400.—History and The Social Sciences for Teachers. 6 credits. Prerequisite: Status as an in-service teacher of History or Social Science in the high schools or junior colleges.

The problems of history and allied disciplines. For in-service teachers who wish to refresh their background and to become acquainted with new methods, materials and approaches. Lectures, discussions and individual work.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

The courses numbered 500 through 599 are primarily for advanced undergraduates but they may be taken for graduate major credit with the approval of the student's graduate supervisory committee. Additional work in these courses, especially on bibliography and historiography, will be required of graduate students. Under no circumstances will a graduate student be allowed to take more than fifty percent of his graduate major in the 500 courses.

HY. 500.—The Nature of History. 3 hours. 3 credits. Offered 1.

The inherent patterns of historical reasoning in the form of a survey and analysis of some generalizations and applications of historical thinking. Required of all History Majors; open to all other seniors who have completed one semester of HY. 599.

HY. 549.—Civil War and Reconstruction. 3 hours. 3 credits. Prerequisites: C-1 or equivalent and 12 additional hours of social sciences. Offered 1.

The causes, course and results of the sectional struggle in the United States; the economic and social significance of Civil War and Reconstruction in the nation.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

HY. 551.—The Old South. 3 hours. 3 credits. Prerequisites: C-1 or equivalent and 12 additional hours of social sciences. Offered 1.

The South to the close of the Civil War: The impact of climate, soil and the plantation system upon Southern social, economic and political life, thought and actions; the sectional clash between North and South; the Civil War in the South.

HY. 552.—The New South. 3 hours. 3 credits. Prerequisites: C-1 or equivalent and 12 additional hours of social sciences. Offered 2.

The South from the Civil War to the present; the impact of the Civil War and Reconstruction; Bourbons and populists; agriculture and industry, society and culture; twentieth century politics.

HY. 591.—Masterpieces in the Social Sciences. 3 hours. 3 credits. Prerequisites: Senior standing and a major in one of the social sciences. Identical with SY. 591, ES. 591, and PCL. 591. Offered 1.

A reading course for advanced undergraduate students. Enrollment limited to students having the approval of their advisor in the major field and the course chairman. Selected works of representative authors who have contributed most to the fields of economics, history, sociology, political science, geography, and anthropology will be read and evaluated.

HY. 592.—Masterpieces in the Social Sciences. 3 hours. 3 credits. Prerequisites: Senior standing and a major in one of the social sciences. Identical with SY. 592, ES. 592, and PCL. 592. Offered 2. The second half of the course HY. 591-592.

HY. 599.—Special Study in History. 3 hours. 3 credits. Prerequisite: Permission of the Instructor. Offered 1, 2.

Tutorial or pro-seminar study in various periods or topics within the areas of United States, Latin-American, European (including both Western Europe and Slavic Europe) and Asiatic history. Designed for the advanced student who desires intensive study and individual guidance in historical work for which no course is normally offered, as an extension to basic work already completed in lecture courses and as an introduction to historical method and analysis. The offerings will reflect the interests of the individual instructor as well as the desire of the students and, therefore, the permission of the instructor must be secured prior to registration. A number of sections of HY. 599 will be available each semester and HY. 599 may be repeated, with change of content, for full credit. Students interested in current offerings should consult their major advisors or The History Department.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

GRADUATE COURSES

Graduate students desiring to take work leading to the degrees of Master of Arts and Doctor of Philosophy must have completed an undergrauate major in History of not less than 24 hours or 36 hours in the social sciences, 18 of which were in History.

For the M.A degree, a mastery of one field of history, at least one course in a field of History related to the area of primary concentration, and HY. 603 are minimum requirements for the degree.

For the Ph.D. degree, the primary area of History must be United States or Latin American History and the dissertation must be in one of these fields. A mastery of three of the following fields of History is required for the doctorate: (1) United States, (2) Latin America, (3) Ancient, (4) Medieval, (5) Modern Europe, (6) English, (7) Middle East, (8) Far East.

HY. 603.—Introduction to Historical Research. 3 hours. 3 credits. Required of all graduate majors. Offered 1.

The basic elements of historical method and bibliography.

HY. 609.—Directed Study in Ancient Civilizations. 3 hours. 3 credits.

Readings, reports and conferences on special topics in Hellenic History.

HY. 610.—Directed Study in Ancient Civilizations. 3 hours. 3 credits.

Readings, reports and conferences on special topics in Roman History.

HY. 613.—Directed Study in the Early Middle Ages. 3 hours. 3 credits.

Readings, reports, and conferences.

HY. 614.—Directed Study in the Later Middle Ages. 3 hours. 3 credits.

Readings, reports, and conferences.

HY. 623.—The Age of Liberal and National Revolutions. 3 hours. 3 credits.

An intensive study of the political, social, economic, intellectual, religious, scientific and artistic developments in Europe between 1815 and 1870, interrelations of the various countries and the mutual influences of Europe and the rest of the world.

HY. 624.—The Age of Conflicting Imperialisms and Ideologies. 3 hours. 3 credits.

An intensive study of the political, social, economic, intellectual, religious, scientific and artistic developments in Europe between 1871 and 1918; the interrelations of the various countries and the mutual influences of Europe and the rest of the world.

HY. 625.—Seminar in Modern European History. 3 hours. 3 credits. Offered 1.

Directed research on selected topics.

HY. 626.—Seminar in Modern European History. 3 hours. 3 credits. Offered 2.

Directed research on selected topics.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

HY. 630.—Individual Work. 3 hours. 3 credits. Offered 1, 2.

A reading or research course in such areas of History as are needed by graduate students. May be elected for full credit in subsequent sessions with change of content.

HY. 635.—The Tudor Period. 3 hours. 3 credits.

A detailed study of England under the Tudors.

HY. 636.—The Stuart Period. 3 hours. 3 credits.

A detailed study of England under the Stuarts.

HY. 637.—The Victorian Age. 3 hours. 3 credits.

The history of Great Britian in the nineteenth century: Reaction and reform, the age of Palmerston, the growth of democracy, economic development, Gladstone and Irish Home Rule; Disraeli and imperialism, foreign affairs and *Pax Britannica* in the nineteenth century.

HY. 638.—Seminar in English History. 3 hours. 3 credits.

Research in special topics.

HY. 647.—United States: The Early National Period. 3 hours. 3 credits.

The United States from 1787 to 1815; Origins, formation and ratification of the Constitution; emergence of economic, social, and political cleavages; Federalists and Jeffersonian Republicans; the Napoleonic era and the War of 1812.

HY. 648.—United States: The Middle Period. 3 hours. 3 credits.

The United States from 1815 to 1850. The "Era of Good Feeling"; political factions and Jacksonian Democracy; territorial expansion, protection, slavery, and sectionalism, humanitarian crusades and utopian experiments.

HY. 651.—The Emergence of Modern United States. 3 hours. 3 credits.

The United States from 1877 to 1920: Big Business, urbanization and passing of the frontier; agrarianism, Populism, imperialism, and progressivism; the New Freedom and World War I.

HY. 654.—Seminar in the South. 3 hours. 3 credits. Offered 2.

Research in special topics.

HY. 655.—Seminar in Colonial and Ante-Bellum Florida. 3 hours. 3 credits.

Research in special topics.

HY. 656.—Seminar in Recent Florida History. 3 hours. 3 credits.

Research in special topics.

HY. 679.—Directed Reading in Latin-American History. 3 hours. 3 credits. Offered 1.

An intensive study of the bibliography and historiography of the Latin-American area during the Colonial period.

HY. 680.—Directed Reading in Latin-American History. 3 hours. 3 credits. Offered 2.

An intensive study of the bibliography and historiography of the Revolutionary and National periods.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

HY. 683.—Directed Readings in Far Eastern History. 3 hours. 3 credits.

A comprehensive study of Western literature on the bibliography and historiography of China, Japan, Korea and Russian Asia with some attention to the classic historians of each country.

HY. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2.

HY. 704.—Historiography and the Philosophy of History. 3 hours. 3 credits. Required of all doctoral candidates. Offered 2.

A study of the theory and practice of historical interpretation and the writing of history.

HY. 751.—Seminar in United States History. 3 hours. 3 credits. Offered 1.

Research in special topics.

HY. 752.—Seminar in United States History. 3 hours. 3 credits. Offered 2.

Research in special topics.

HY. 777.—Seminar in Latin-American History. 3 hours. 3 credits. Offered 1.

Research in special topics. A reading knowledge of Spanish or Portuguese is required.

HY. 778.—Seminar in Latin-American History. 3 hours. 3 credits. Offered 2.

Research in special topics. A reading knowledge of Spanish or Portuguese is required.

HY. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2.

INDUSTRIAL ARTS EDUCATION

Instructional Staff 1956-57

Bergengren, R. F., Jr., Head; Massey, H.; Meyer, H. K.; Neubauer, G. W.; Strickland, T. W.

IN. 102.—Elementary Woodwork. 5 hours. 3 credits. Offered 1, 2.

Projects, shop sketching, wood finishing, common tool techniques in hand woodworking, and related information. An introductory course.

IN. 110.—Elementary Mechanical Drawing. 5 hours. 3 credits. Offered 1.

Care and use of drafting instruments, practice in sketching, lettering, dimensioning, orthographic projection, working drawings, and blueprint reading.

IN. 111.—Advanced Mechanical Drawing. 5 hours. 3 credits. Offered 2.

Sketching and dimensioning on machine parts, detail and assembly drawings, pictorial representation, checking and tracing.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

IN. 300.—Machine Woodwork. 5 hours. 3 credits. Offered 1, 3.

Power machinery and machine maintenance, and use of the jointer, tilting arbor saw, band saw, lathe, mortiser, drill press, router, shaper, and other machines.

IN. 320.—General Bench Metals. 5 hours. 3 credits. Offered 1.

Hand tools and processes in metals, including forming, molding, raising, chasing, piercing, and planishing; basic sheet metals, including layout, development, soldering, seaming, wiring, and riveting.

IN. 330.—Elementary Handcrafts. 5 hours. 3 credits. Offered 1, 3.

Creation of simple projects in such media as leather, textiles, clay, reed, plastics, linoleum block, metal, wood, and native materials.

IN. 331.—Handcrafts. 5 hours. 3 credits. Offered 2.

Major areas include leather carving and tooling, metal etching, wood carving, pottery, plastics, and textiles.

IN. 340.—Laboratory Planning and Maintenance. 3 hours. 3 credits. Offered 2.

Care and maintenance of the common hand and machine tools; laboratory design and layout for utility and safety.

IN. 341.—General Shop. 3 hours. 3 credits. Offered 1.

Open only to industrial arts majors or by approval of the instructor. Techniques in the general shop. The use of films, industrial visitation, and other devices.

IN. 400.—Design and Construction in Wood. 5 hours. 3 credits. Offered 2.

Basic principles of design and practices in their application.

IN. 401.—Wood Finishing. 5 hours. 3 credits. Offered 1.

Common types of finishing materials, techniques, and practices employed in school industrial arts laboratories.

IN. 410.—Architectural Drawing. 5 hours. 3 credits. Offered 1.

Preparation of presentation drawings, models, working drawings, and specifications with consideration of related problems.

IN. 411.—Problems in Architectural Drawing. 5 hours. 3 credits. Offered 2.

Architectural development, materials, techniques of construction, building orientation, heating, lighting, ventilation, and landscaping.

IN. 420.—Machine Shop Practice. 5 hours. 3 credits. Offered 2.

Use of precision instruments and cutting tools, drill press, grinding machine, lathe, milling machine, and shaper.

IN. 421.—Metals and Industrial Processes. 5 hours. 3 credits. Offered 1.

Tools, materials and industrial processes involved in molding, casting, welding, forging, and heat treatment.

IN. 430.—Advanced Handcrafts. 5 hours. 3 credits. Offered 1.

Creative design aspects and the vertical development of a few selected skills.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

IN. 431.—Handcrafts Problems. 5 hours. 3 credits. Offered 2, 3.

Specialization in one or two craft areas, emphasizing design and skill.

IN. 440.—Industrial Arts Laboratory. 5 hours. 3 credits. Offered 1, 2, 3.

For advanced undergraduate students. Extension of work in one of the certification areas in industrial arts.

GRADUATE COURSES

IN. 606.—History and Philosophy of Industrial and Vocational Education. 3 hours. 3 credits. Offered 1, 3.

Historical background and educational philosophies with emphasis on modern concepts.

IN. 623.—School Shop Planning. 3 hours. 3 credits. Prerequisite: IN. 340 or equivalent. Offered 2.

Design of school shops, including selection and placement of equipment.

IN. 624.—Problems in Industrial Arts and Vocational Education. 3 hours. 3 credits. Offered 1.

Seminar for advanced students.

IN. 625.—Advanced Industrial Arts Design. 3 hours. 3 credits. Prerequisite: IN. 410 or equivalent. Offered 2.

Laboratory design practice in various media.

IN. 630.—Individual Work. 3 credits. Offered 1, 2, 3.

Problems approved by the instructor.

IN. 633.—Industrial Arts and Vocational Laboratory Seminar. 3 hours. 3 credits. Prerequisite: IN. 331 or equivalent. Offered 3.

Advanced laboratory techniques and opportunity for in-service graduates to exchange experiences.

IN. 635.—Curriculum Symposium in Industrial Education. 3 hours. 3 credits. Prerequisite: IN. 606 or equivalent. Offered 3.

A staff symposium concerning the industrial curriculum, a review of the current situation, and research of a projective nature.

IN. 653.—Industrial-Technical Resources. 3 hours. 3 credits. Prerequisite: IN. 421 or equivalent. Offered 3.

A study of resources through visitation, observation, evaluation, and report.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

INDUSTRIAL ENGINEERING

Instructional Staff 1956-57

Martinson, E. P., Head; Blekking, E. H., Downey, P. M., Eshleman, S. K., Gregg, R., Kleinschmidt, A. C., Kopp, E. W., Kromp, C. M., Wilcox, D. B., Young, W. R.

IG. 201.—Introduction to Industrial Engineering. 2 hours. 2 credits. Prerequisite: MS. 106. Offered 1, 2.

The analytical engineering approach as applied to problems encountered in modern industry in coordinating manpower, materials, equipment and methods. Orientation in industrial engineering responsibilities and opportunities in industry and the community.

IG. 321.—Work Simplification and Standardization. 2 hours and 3 hours laboratory. 3 credits. Prerequisite: Upper Division classification. Offered 1, 2.

Process analysis, operation analysis, and time standardization procedures applied to work situations. A special course for any upper-classman not majoring in Industrial Engineering. The laboratory work provides instruction and experimentation in time measurement techniques.

IG. 322.—Plant Development and Operation. 3 hours. 3 credits. Prerequisite: Upper Division classification. Offered 2.

The factors affecting plant location, plant layout, and plant operation. A special course for any upper-classman not majoring in Industrial Engineering.

IG. 371.—Job Analysis and Evaluation. 2 hours. 2 credits. Prerequisite: Upper Division classification. Offered 1, 2, 3.

Analysis of the mental and physical requirements, responsibilities and working conditions of jobs and the several systems of determining the relative worth of jobs. Wage determination. Job evaluation plan installation and maintenance. Merit rating.

IG. 372.—Time and Motion Study. 2 hours and 3 hours laboratory. 3 credits. Prerequisite: Engineering classification. Offered 1, 2.

The study of working procedures to determine the best methods, the best human motions and establishment of time standards. Methods analysis.

IG. 451.—(Identical with MS. 463).—Quality Control. 3 hours. 3 credits. Prerequisite: MS. 354. Offered 1, 2.

A study of problems in the analyzing, planning, and interpreting of quantitative data arising from chemistry, physics, and engineering, together with the underlying statistical theory. Includes quality control, sequential analysis, statistical tests, and introduction to appropriate computing techniques.

IG. 460.—Engineering Economy. 3 hours. 3 credits. Prerequisite: Engineering classification. Offered 1, 2, 3.

The economic aspect of technical projects; the importance of alternative solutions being selected through economy, intangible and financial analysis stressed. "Will it pay?" and "Can it be financed?" Questions are analyzed from the engineering and management viewpoints. Lectures, discussions, and the solution of problems.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

IG. 463.—Specifications, Contracts, Ethics and Industrial Safety. 3 hours. 3 credits. Prerequisite: Engineering classification. Offered 1, 2, 3.

Specifications writing for materials and construction of engineering projects; advertising and letting of contracts, agreements and contractual relations. Engineering ethics. Organization of safety work in industry; accident causes and legal responsibility of employer and employee.

IG. 464.—Accident Prevention Engineering. 2 hours. 2 credits. Prerequisite: Engineering classification. Offered 1, 2.

Accident and industrial health safeguards. Protective design in plant and equipment. Employee training in safe methods of performing tasks.

IG. 468.—Sales Engineering. 3 hours. 3 credits. Prerequisite: Engineering classification. Corequisite: BS. 233. Offered 1, 2.

Analysis of needs. Recommending, selling, installing and servicing mechanical equipment and systems.

IG. 469.—Plant Location, Selection and Layout. 3 hours and 3 hours laboratory. 4 credits. Prerequisite: Senior Engineering classification. Offered 1, 2.

Emphasis is given to the problems usually encountered in establishing a new enterprise and in analyzing existing plants. Plant and site selection, product analysis, equipment determination, material handling, production areas, service areas, plant layout, and costs are studied as separate entities and in their interrelationships within an organization. Plant organization, flow charts and diagrams.

IG. 470.—Plant Operation and Controls. 3 hours and 3 hours laboratory. 4 credits. Prerequisite: Senior Engineering classification. Offered 1, 2.

Organizing for production. Employee selection and work assignments. Planning, scheduling, production control, quality control, storekeeping, cost control, and operating budgets.

IG. 472.—Human Engineering. 2 hours. 2 credits. Prerequisite: Engineering classification. Offered 1, 2, 3.

Human nature in design and production problems. Consideration of the human element in the design of equipment and processes, as well as human reactions to plant situations.

IG. 479.—Industrial Engineering Seminar. 1 hour. 1 credit. Prerequisite: Senior Engineering classification. Offered 1, 2.

Lectures and discussions on general and specific engineering problems. Individual student investigations and reports on assigned topics. Orientation for an industrial career.

IG. 480.—Industrial Development. 2 hours. 2 credits. Prerequisite: Senior Engineering classification. Offered 1, 2.

A study of industrial development regionally and nationally as well as by industries. The effect of new discoveries and new consumer needs on future engineering problems is stressed.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

IG. 481.—Industrial Engineering Projects. 1 hour and 6 hours laboratory. 3 credits. Prerequisite: Permission of the instructor. Offered 1, 2.

Project planning, investigation, experimentation, analysis and report writing on an individual basis. Individual initiative and responsibility are stressed. Especially designed for students interested in research on specific problems or planning to do graduate work.

IG. 570.—Manufacturing Operations Analysis. 3 hours or equivalent. 3 credits. Corequisites: IG. 470 and permission of instructor.

The technical analysis and solution of the more complex problems in manufacturing operations.

IG. 572.—Predetermined Time Standards. 1 hour and 6 hours of laboratory. 3 credits. Prerequisites: IG. 372 and permission of instructor.

Study of the principles and applications of predetermined time systems. Advanced training in concepts of motion economy with emphasis on unit cost reduction through design of work methods, work place, tools and equipment.

GRADUATE COURSES

Prerequisites: Thorough foundation in the basic engineering sciences plus a total of approximately thirty hours of undergraduate professional course work or its equivalent in professional experience.

IG. 661.—Advanced Industrial Plant Layout and Organization. 3 hours or equivalent. 3 credits. Prerequisite: IG. 469, IG. 470 or equivalent.

Advanced study in the design and layout of factory facilities and manpower requirements.

IG. 662.—Advanced Studies in Plant Operation. 3 hours or equivalent. 3 credits. Prerequisite: IG. 470 or equivalent.

Advanced study in the mechanics of operating industrial plants. Control stystems for and on production. Costs. The engineer's relation with management.

IG. 664.—Industrial Supervision. 3 hours. 3 credits. Prerequisite: IG. 470 or equivalent.

Deals with problems arising in modern plant operations.

IG. 665.—Work Measurement Theory and Practice. 3 hours or equivalent. 3 credits. Prerequisite: IG. 572.

Lectures and assignments on the various methods and systems of work analysis and measurement and their evaluation. Studies of mechanical devices and aids used in motion and time study. Work is designed to develop knowledge of and dexterity in the use of devices.

IG. 666.—Engineering Valuation. 3 hours. 3 credits. Prerequisites: ATG. 313, IG. 460 or equivalent.

Engineering valuation—Industrial Engineering theory, applied to cost reduction programs in industry.

IG. 667.—Industrial Research. 1 hour and 6 hours laboratory. 3 credits. Prerequisite: Permission of Instructor.

Investigations into the need for, and the design or invention of new methods or devices for accomplishing work. Patent procedures, design, building devices or mock-ups. Evaluation of results. Lectures, discussion, and laboratory work on the project basis.

IG. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

INTER-AMERICAN STUDIES

IA. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

IA. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2, 3.

INTERIOR DESIGN

Instructional Staff 1956-57

Torraca, P. M., Acting Head; Shepard, W. W., Sebold, H. R.

IR. 201.—Home Decoration, I. 6 hours of conference and studio work. 3 credits. Offered 1, 3.

Elements and principles of interior design as applied to the home. A study of interior space and furnishings, and a consideration of basic factors such as scale, form, color, and arrangement.

IR. 202.—Home Decoration, II. 6 hours of conference and studio work. 3 credits. Prerequisite: IR. 201. Offered 2, 3.

Problems in the application of fundamental principles to the interior design and decoration of the home. Solutions presented in the form of plan and model arrangements, schematic drawings, color and texture collages, and idea sketches.

IR. 301-302-303-304.—Projects in Interior Design, Group I. 24 hours of conference and studio work. 3 credits each; group total 12 credits. Prerequisite: Completion of Lower Division program in Interior Design or equivalent. This series constitutes the beginning work in the Upper Division professional curriculum. Offered 1, 2, 3.

A study of the problems involved in the design, construction, and execution of a variety of types of room interiors.

RESEARCH: Historic research in ancient and medieval architecture with special emphasis on internal architecture and furnishings.

DESIGN: Problems in interior architecture, lighting, the use of fabrics, furnishings, and accessories all of which are studied in correlation with the principles of line, value, color, texture, and form. Schematic studies, designs, drawings, and presentation techniques.

MATERIALS AND METHODS: Study of interior structural and surfacing materials and consideration of the structural and mechanical elements of buildings and their influence upon the design of the interior.

IR. 311-312-313-314.—Projects in Interior Design, Group 2. 24 hours of conference and studio work. 3 credits each; group total, 12 credits. This series of courses is a continuation of the work of the series IR. 301-302-303-304. Offered 1, 2, 3.

A study of the problems involved in the design, construction, and execution of more complex types of room interiors and suites.

RESEARCH: Historic research in Renaissance architecture with special emphasis on internal architecture and furnishings.

DESIGN: Emphasis on the study of domestic interiors with special consideration given to contemporary space planning theories and practices.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MATERIALS AND METHODS: A continuation of structural and mechanical factors and an introduction to joinery, upholstering, and cabinet making, furniture, furniture woods and finishes, working and measured drawings, and remodeling.

IR. 401-402-403-404.—Projects in Interior Design, Group 3. 24 hours of conference and studio work. 3 credits each; group total, 12 credits. This series of courses is a continuation of the series IR. 311-312-313-314. Offered 1, 2, 3.

A study of the problems involved in the design, construction, and execution of commercial and institutional interiors of special nature or magnitude.

RESEARCH: Historic research into the "Golden Age" of furniture and interior architecture, and the beginning of the industrial revolution.

DESIGN: Emphasis on the study of commercial and institutional interiors involving special design of structures, furnishings, and accessories.

MATERIALS AND METHODS: A continuation of the study of interior construction, detailing, scale drawings and methods of installation and an introduction to estimating, and trade practices.

IR. 411-412-413-414.—Projects in Interior Design, Group 4. 24 hours of conference and studio work. 3 credits each; group total, 12 credits. This series of courses is a continuation of the series IR. 401-402-403-404. Offered 1, 2, 3.

A study of the problems involved in the design, construction, and execution of the monumental and the interior of special nature or magnitude.

RESEARCH: Historic research into the origins of the modern movement with special emphasis on contemporary architecture and furnishings.

DESIGN: A continuation of the study of interior design with emphasis on interiors presenting difficult functional, technical, or aesthetic problems.

MATERIALS AND METHODS: A continuation of the technical studies previously introduced and an introduction to specification writing, job and office administration, professional ethics and client relations, and the responsibilities of the interior designer as a professional.

JOURNALISM

Instructional Staff 1956-57

Weimer, R. O., Director; Cunningham, H. W., Davis, H. G., Emig, E. J., Jones, J. P., Seil, M. D., and Winter, W. E.

The offerings in journalism are primarily designed for the training of professional journalists in the field of editorial-news, advertising, and public relations. These courses, however, may be taken for elective credit by students in all Upper Division units of the University. Students who are interested in major work in journalism are referred to the requirements of the School of Journalism and Communications.

JM. 301.—Elementary Reporting. 5 hours lecture-laboratory. 3 credits. Prerequisite: COM. 201. Offered 1, 2.

Basic instruction and practice in news gathering and news writing, with special attention being given to style, the writing of news leads, expansion of leads into good news stories, development of a sense of news values, and the handling of news sources.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

JM. 302.—Advanced Reporting. 4 hours lecture-laboratory. 2 credits. Prerequisite: JM. 301. Offered 1, 2.

Instruction and practice in reporting public affairs, with special emphasis upon responsible news coverage of city, county, and state government.

JM. 306.—Elements of Advertising. 3 hours. 3 credits.

The role of advertising in a free economy, and its place in the media of mass communications. A study of advertising appeals, product and market research, selection of media, testing of advertising effectiveness, organization of the advertising profession.

JM. 310.—Advertising Copy and Layout. 5 hours lecture-laboratory. 3 credits. Prerequisites: JM. 306 or BS. 433, and JM. 315. Offered 2.

Theory and practice of writing copy and preparing layouts for printed advertising; budgeting and scheduling classified display advertising in periodicals.

JM. 315.—Typography. 3 hours lecture-laboratory. 2 credits. Offered 1, 2.

Processes involved in producing printed matter for newspapers, magazines, pamphlets, advertising, etc., along with detailed study of type and typography.

JM. 318.—Newspaper Management. 2 hours. 2 credits. Offered 1.

A study of the organization of the publishing plant, covering staffing, budgeting, and directing the work of news, classified and display advertising, circulation, promotion, business, and mechanical departments.

JM. 320.—Agricultural Journalism. 4 hours lecture-laboratory. 3 credits. Prerequisite: Junior standing or permission of the instructor. Offered 2.

Fundamental instruction in the gathering and writing of agricultural news for daily and weekly newspapers, radio, and farm periodicals, with special attention being given to the techniques of publishing the activities of agricultural and home demonstration workers.

JM. 325.—Contemporary Affairs. 2 hours. 2 credits. Offered 1, 2.

Lectures and discussion of major news developments and their background; current political, economic, social, and scientific developments. Aims to give the student an understanding of world and domestic problems.

JM. 330.—Contemporary Latin American Journalism. 5 hours lecture-laboratory. 3 credits. Prerequisite: A reading knowledge of English and Spanish.

Aims to give students of journalism and of Latin American affairs a contrast in journalistic practices in Latin America with those of the United States through intensive readings and analyses of Latin American newspapers and periodicals. Students will get an insight into Latin American social, economic and political institutions through study of publications from these republics.

JM. 340.—Editing. 4 hours lecture-laboratory. 2 credits. Prerequisites: JM. 301 and JM. 315. Offered 1.

To provide fundamental instruction and practice in essentials of news editing, with special emphasis given to editing the weekly and daily newspaper. Included are essentials of copyreading, headline writing, news judgment, make-up and special page and picture editing.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

JM. 341.—(Identical with ART 341).—Elementary Photography. 6 hours of lecture-laboratory. 3 credits. Prerequisite: C-2. Offered 1, 2.

The fundamentals of camera equipment, developing and printing, practical lighting (exterior and interior), and practical optics. Elementary composition and picture making. Special training in news photography and use of a Speed-Graphic camera for newspaper and magazine work.

JM. 407.—History of Journalism. 3 hours. 3 credits. Offered 1, 2.

Origin, development and potentiality of all the media in the field of Communications. Analysis will be made of the evolution of standards, polices, methods and controls with emphasis on contributions of broadcasters, writers, discoveries and inventors.

JM. 413.—Magazine and Feature Writing. 3 hours. 3 credits. Prerequisite: JM. 301 or permission of instructor. Offered 2.

Preparation of special articles for publication in newspapers and magazines coordinated with study of magazine-editing problems. Supervised marketing of articles produced in the course. Required for most Journalism majors and also recommended for students outside the School who plan to write for professional and trade publications or those who desire training in the magazine writing field.

JM. 414.—Public Relations. 3 hours. 3 credits. Prerequisite: COM. 201 or permission of instructor. Offered 1, 2.

The relationship between journalistic media and the public, and the principles, methods and means of influencing the public. Public relations programs will be prepared.

JM. 430.—Individual Problems in Journalism. 3 hours. 3 credits. Prerequisites: At least 15 hours of Journalism in the Upper Division and consent of the instructor. Offered 1, 2.

Designed for seniors in their graduating semester. Students and the instructor concerned will choose a problem or project which will give the student actual experience in his major field.

JM. 450.—Applied Journalism. 2 hours and 6 hours laboratory. 3 credits. Prerequisites: JM. 301, JM. 302 and JM. 340. Offered 2.

A senior course bringing together the work of the preceding news courses into actual outside experience and newsroom laboratory training in the preparation and handling of news copy, pictures and syndicated material.

JM. 460.—Advertising Seminar. 2 hours. 2 credits. Prerequisite: 15 hours of professional work in Journalism. Offered 2.

A seminar bringing together the work of the preceding advertising courses, and projecting this knowledge to the solution of problems that will arise in the professional field. Four-day advertising field trip required.

JM. 465.—Journalism Seminar. 2 hours. 2 credits. Prerequisite: Fifteen hours of Journalism. Offered 1, 2.

An investigative and discussion approach to the advanced problems, policies, and responsibilities found in the various areas of journalism, in an effort to relate the work of the journalist with other fields of knowledge and to test his competency for professional employment.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

JM. 508.—Public Opinion. 3 hours. 3 credits. Prerequisite: Senior Standing. Offered 1, 2.

The force of public opinion in modern life; the psychological technique and strategy of directors of public opinion; attitude-measurement; reader-interest surveys; radio-audience and movie audience measurement; market and consumer analysis; public opinion polls.

JM. 509.—Law of the Press and Radio-TV. 3 hours. 3 credits. Prerequisite: COM. 201 or permission of instructor. Offered 1, 2.

How to avoid legal difficulties in journalistic activities, with special attention to provisions of Florida law relating to journalism and radio-TV.

JM. 512.—Advertising Campaigns. 3 hours. 3 credits. Prerequisite: JM. 310. Offered 1.

An advanced advertising course requiring the student to prepare and produce complete retail and general advertising campaigns. Emphasis is placed on production methods, materials, and costs.

JM. 515.—Journalism in Secondary Schools. 3 hours. 3 credits. Prerequisite: Senior standing or permission of the instructor. Offered 1.

This course is designed for persons who have been teaching journalism in secondary schools, or who act as faculty advisers for school newspapers, magazines or yearbooks. It includes a general survey of the editorial, business, publishing and mechanical phases of school publications with emphasis on those aspects which are of particular value to teachers.

GRADUATE COURSES

Prerequisites: An approved undergraduate major of twenty-four semester hours, or its equivalent, in journalism, is required for enrollment in graduate courses and for registration for the degree of Master of Arts with a major in journalism.

Not more than two of the 500-numbered courses may, with approval of the School's Graduate Committee, be taken for major graduate credit.

JM. 603.—Special Studies in Newspaper Production. 3 hours. 3 credits. Offered 1.

Seminar study in business office and production plant aspects of newspaper publication based on original research in finance, circulation, employee relationships, promotion, advertising, etc.

JM. 604.—Special Studies in Newspaper Production. 3 hours. 3 credits. The second half of the course JM. 603-604. Offered 2.

JM. 605.—Mass Communications and Society, I. (Identical with COM. 605). 3 hours. 3 credits. Offered 1.

Rights and responsibilities of the communicator. Propaganda and public opinion. Interaction of mass media and society. Government, politics, and mass communications. Relationship and competition among mass media.

JM. 606.—Mass Communications and Society, II. (Identical with COM. 606). 3 hours. 3 credits. The second half of the course JM. 605-606. Offered 2.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

JM. 611.—History of Communications. (Identical with COM. 611). 3 hours. 3 credits. Offered 1.

Reading, critical study, and advanced investigative report on an approved research subject selected from such areas as; the development of concepts and principles in communications; biographies of great editors and commentators; regional and state journalism; evolution of communication agencies.

JM. 614.—Problems in Public Relations. (Identical with COM. 614). 3 hours. 3 credits. Offered 2 .

Advanced professional instruction and training in the field of public relations. Project method of research.

JM. 616.—Seminar in Journalism Teaching. 3 hours. 3 credits. Offered 2.

Research and training for those planning to teach journalism or supervise publications in the secondary schools.

JM. 618.—Comparative Journalism. 3 hours. 3 credits. Offered 2.

Research in the broad area of government and mass communications in the United States and foreign countries.

JM. 630.—Individual Work. 3 hours. 3 credits. Offered 1, 2.

A reading or research course in such areas of Journalism as are needed by graduate students. May be elected for full credit in subsequent sessions with change of content.

JM. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2.

LANDSCAPE ARCHITECTURE

Instructional Staff 1956-57

Torraca, P. M., Acting Head; Sebold, H. R.

LAE. 301-302-303-304.—Projects in Landscape Architecture, Group 1. 24 hours conference and studio. 3 credits each; group total, 12 credits. Prerequisite: Completion of Lower Division program in Landscape Architecture or equivalent. Corequisite: BTY. 101. Offered 1, 2.

This series constitutes the beginning work in the Upper Division. The principles involved in landscape design, including form, light, color and texture in relation to plants, materials, and buildings. The preparation of contour maps, grading plans, profiles, cross sectioning and the calculation of cut and fill. The history of Landscape Architecture in relation to the social, cultural and economic influences through the period beginning in pre-history to the decline of the Roman Empire. Projects will consist of research and study, simple design problems, and exercises in delineation and presentation.

LAE. 311-312-313-314.—Projects in Landscape Architecture, Group 2. 24 hours conference and studio. 3 credits each; group total, 12 credits. Corequisite: SLS. 301. Offered 1, 2. A continuation of the work of the series LAE. 301-302-303-304.

The application of the principles of form, light, color and texture to small landscape design problems. The study of methods of construction in masonry walls, paving and different types of walks. The history of Landscape Architecture from the decline of the Roman Empire to the English Renaissance. Projects will consist of research and study, design problems and exercises in delineation and presentation.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

LAE. 401-402-403-404.—Projects in Landscape Architecture, Group 3. 24 hours conference and studio. 3 credits each; group total, 12 credits. Corequisite: HE. 429. Offered 1, 2. A continuation of the work of the series LAE. 311-312-313-314.

The design of landscape schemes, public and private, encountered in contemporary practice; methods of construction involved in terraces, stairways, pools and retaining walls; and the history of Landscape Architecture from the English Renaissance to the present day. Projects will consist of research and study, design problems, outdoor sketching and exercises in delineation.

LAE. 411-412-413-414.—Projects in Landscape Architecture, Group 4. 24 hours conference and studio. 3 credits each; group total, 12 credits. Corequisite: HE. 430. Offered 1, 2. A continuation of the work of the series LAE. 401-402-403-404.

The series includes: the design of large landscape schemes; a study of professional relations; and modern landscape practice, ethics, and law. Projects will consist of research and study, design problems and exercises in presentation.

LATIN

Instructional Staff 1956-57

Brunet, J., Head; Aratowsky, B.

The undergraduate major must include LN. 307-308, LN. 406-407 and LN. 410-411, or the equivalent. In addition, the major must include, as a subsidiary requirement, FLE. 351, FLE. 352 and six semester hours of one or more foreign languages other than the major.

LN. 105.—The Latin Element in English. 2 hours. 2 credits. Offered 1.

Study of Latin words in all varieties of current English, including scientific vocabularies. Open to all students. No previous knowledge of Latin is required. May not be used for major credit in the College of Arts and Sciences. Given alternately with Greek 105.

LN. 133.—First-Year Latin. 3 hours. 3 credits. Offered 1.

LN. 134.—First-Year Latin. 3 hours. 3 credits. Prerequisite: LN. 133, or the equivalent. Offered 2.

LN. 201.—Second-Year Latin. 3 hours. 3 credits. Prerequisite: LN. 134, or the equivalent. Offered 1.

Reading and interpretation of selections from Roman prose and poetry. Grammar study.

LN. 202.—Second-Year Latin. 3 hours. 3 credits. Prerequisite: LN. 201, or the equivalent. Offered 2.

LN. 307.—Survey of Latin Literature. 3 hours. 3 credits. Prerequisite: LN. 202, or the equivalent.

Translation, interpretation and discussion of texts from Latin authors. Collateral readings and reports.

LN. 308.—Survey of Latin Literature. 3 hours. 3 credits. Prerequisite: LN. 202, or the equivalent.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

LN. 406.—Selections from the Correspondence of Cicero and Pliny the Younger. 3 hours. 3 credits. Prerequisite LN. 307-308, or the equivalent.

LN. 407.—Selections from the Comedies of Plautus and Terence. 3 hours. 3 credits. Prerequisite: LN. 307-308, or the equivalent.

LN. 410.—Latin Prose Composition. 3 hours. 3 credits. Prerequisite: LN. 307-308, or the equivalent.

LN. 411.—Latin Prose Composition. 3 hours. 3 credits. Prerequisite: LN. 410, or the equivalent.

LN. 430.—Individual Work. 3 hours. 3 credits. Prerequisites: 12 hours of college Latin or the equivalent, and permission of the department head. Offered 1, 2.

Readings, conferences and reports. By means of this course, advanced students may study subjects in Latin Literature, language and civilization for which there are no special course offerings. With change of content, LN. 430 may be elected for additional credit in subsequent sessions.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

LN. 550.—Problems of Teaching. 3 hours. 3 credits. Prerequisites: LN. 406-407 and LN. 410-411, or the equivalent.

The role of Latin in modern education; the objectives and methods of teaching Latin in secondary schools; the teaching and value of composition; testing; the preparation of the Latin teacher in subject matter and in professional education; aspects of Latin that offer particular problems to the high school teacher, with special reference to authors commonly taught in high schools.

COURSES FOR GRADUATES

Prerequisite: Thirty semester hours, or the equivalent, of undergraduate work in Latin, which must include LN. 307-308, LN. 406-407 and LN. 410-411, or the equivalent. In addition, a reading knowledge of a foreign language other than Latin is required.

LN. 615.—Special Study in Latin Literature. 3 hours. 3 credits.

The study of types of literature and of individual authors. Each time it is offered the course is announced in the schedule of courses with a special subject in Latin literature, such as one of the following, specified: Elegy; The Epic; The Political and Moral Essays of Cicero; Roman Historians; Roman Satire; Lucretius. With change of content LN. 615 may be elected for credit in subsequent sessions.

LN. 617.—Vulgar Latin. 3 hours. 3 credits.

The phonology, morphology and syntax of Vulgar Latin, with special reference to the development of the Romance languages.

LN. 620.—The Latin Language: Phonology and Morphology. 3 hours. 3 credits.

LN. 621.—The Latin Language: Syntax. 3 hours. 3 credits.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session

LN. 630.—Individual Work. 3 hours. 3 credits. Offered 1, 2.

Readings, conferences and reports. By means of this course, students may study subjects in Latin literature, language and civilization for which there are no special course offerings. With change of content, LN. 630 may be elected for additional credit in subsequent sessions.

LN. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2.

LAW

Instructional Staff 1956-57

Fenn, Henry A., Dean; Mautz, Robert B., Assistant Dean; Black, Kenneth L., Clark, Vernon W., Day, James W., Delony, Dexter, Enwall, Hayford, O., Glicksberg, Mandell, Jones, Ernest M., Krastin, Karl, Macdonald, William D., Maloney, F. E., Slagle, Dean, Stephens, Richard B., Taracouzio, T. A., TeSelle, Clarence, J., Yonge, Philip K.

LW. 401.—Contracts I. 3 hours. 3 credits. Offered 1, 2.

An introduction to the law of business agreements; enforceability of promises; consideration; formation and discharge of contracts.

LW. 402.—Contracts II. 2 hours. 2 credits. Offered 1, 2.

The effect of various types of non-performance on the rights and duties of the parties to a business agreement; assignability of contracts; rights of third-party beneficiaries.

LW. 403.—Criminal Law and Procedure I. 2 hours. 2 credits. Offered 1, 2.

Sources of state and federal criminal law; nature of crime; elements of crime in general; elements of particular crimes at common law and in Florida; applicable Florida statutes and their construction in reference to particular crimes and criminal procedure.

LW. 404.—Criminal Law and Procedure II. 2 hours. 2 credits. Offered 1, 2.

A continuation of LW. 403. Also: defenses in criminal prosecutions; Federal Rules of Criminal Procedure and their construction.

LW. 405.—Introduction to Equity. 2 hours. 2 credits. Offered 1, 2.

Nature and enforcement of decrees of equity; possessory bills; equitable relief against torts, including protection of rights in land, tangible and intangible personal property, and personality, public and political interests; unjust enrichment as related to equity.

LW. 406.—Introduction to Public Law. 3 hours. 3 credits. Offered 1, 2.

Formerly "Administrative Process" and "United States Constitutional Law I." Nature of constitutional government; problems of dual sovereignty; analysis of the legislative, executive, judicial and administrative functions of government; Supreme Court jurisdiction and procedural steps related to review; the legislative process and interpretation of statutes; the role of the executive branch; implied powers; problems of delegation; interstate and foreign commerce; federal taxing and spending; procedural and substantive due process; fundamentals of administrative law.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

LW. 407.—Introduction to Judicial Administration. 2 hours. 2 credits. Offered 1, 2.

Formerly "Procedure I." The nature of adjective law and its relation to substantive law; federal and state court systems; selection, tenure and removal of judges; powers and duties of attorneys; the grand jury; the petit jury; judicial power and separation of powers; extra-ordinary writs; equity and admiralty jurisdiction; common law forms of action.

LW. 408.—Introduction to Legal Research and Writing. 2 hours. 2 credits. Offered 1, 2.

Formerly "Legal Bibliography." Makeup and content of legal encyclopedias, digests, citators, reporter systems, periodicals, and texts; legal vocabulary and style; format; organization of a note, a case comment, and an office memorandum of law; technique of thorough, accurate, and rapid research. Each student will prepare a simple note or comment and a memorandum of law on assigned problems.

LW. 409.—Introduction to Property. 3 hours. 3 credits. Offered 1, 2.

Formerly "Property I" and "Property II." Distinction between real property and personal property; acquisition of title to personal property; introduction to law of real property; types of estates; origin and development of methods of creating and transferring estates.

LW. 410.—Estates and Trusts I. 3 hours. 3 credits. Offered 1, 2.

The substantive law of intestate succession, execution of wills, making of gifts inter vivos and causa mortis, and creation non-commercial trusts.

LW. 411.—Torts I. 2 hours. 2 credits. Offered 1, 2.

Intentional harms to persons and property; assult and battery, false imprisonment, trespass to land, interference with chattels, infliction of mental disturbance; strict liability; defamation; invasion of privacy.

LW. 412.—Torts II. 3 hours. 3 credits. Offered 1, 2.

Negligence: early developments, standard of care, duty to act, functions of judge and jury, res ipsa loquitur, proximate cause, defenses, measure of damages; nuisance; liability of owners and occupiers of land; relationship of tort and contract liability; misrepresentation; malicious prosecution and abuse of process; interference with advantageous relations.

LW. 501.—Commercial Transactions I. 3 hours. 3 credits. Offered 1, 2.

Formerly "Sales" and "Negotiable Instruments." An integrated study of the law applicable to commercial transactions, with emphasis on the distribution of goods, the issuance and negotiation of commercial paper, and the means by which transactions are secured, such as, conditional sales, chattel mortgages, liens, pledges, and contracts of suretyship.

LW. 502.—Commercial Transactions II. 2 hours. 2 credits. Offered 1, 2.

A continuation of Commercial Transactions I.

LW. 503.—Business Organizations. 3 hours. 3 credits. Offered 1, 2.

Creation of business associations, including corporations; rights and liabilities, both to each other and to third persons, arising from the relationship of master-servant and principal-agent, considered in the context of such associations; partnership property and rights of partnership creditors contrasted with rights of creditors of individual partners; termination and dissolution of partnership.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

LW. 504.—Private Corporations. 3 hours. 3 credits. Offered 1, 2.

State constitutions and statutes; articles of incorporation; powers reserved by the state; promoters and underwriters; preincorporation stock subscriptions; corporate organizations; drafting and adoption of by-laws; exercise of corporate powers; rights and duties of officers and directors; classes of stock; rights of stockholders; state regulation of transfers of stock; liability of stockholders, officers and directors; stockholder's derivative and representative suits; voluntary dissolution.

LW. 505.—State and Local Taxation. 2 hours. 2 credits. Offered 1, 2.

Nature and purposes of federal and state taxation; comparison of property and excise taxes; tax jurisdiction; assessment procedures; methods of collecting taxes; remedies of taxpayers for illegal taxation.

LW. 506.—Estate and Gift Taxation. 2 hours. 2 credits. Offered 1, 2.

Elements of federal tax procedure; fundamentals of federal estate and gift taxation; techniques of federal tax research.

LW. 507.—Pleading and Jurisdiction. 4 hours. 4 credits. Offered 1, 2.

Formerly "Procedure II." History of Florida and Federal procedural law; joinder and splitting of causes of action; counterclaims; venue; in personam and in rem jurisdiction; real parties in interest; joinder of parties; interpleader; intervention; class suits; commencement of action; pleadings and motions.

LW. 508.—Evidence. 4 hours. 4 credits. Offered 1, 2.

Witnesses, including competency, privilege, examination, impeachment and rehabilitation; character evidence; hearsay and the exceptions to its exclusion; opinion; real evidence; proof of execution of writing; the "best-evidence" rule; judicial notice; presumptions; burden of proof.

LW. 509.—Acquisition of Real Property. 3 hours. 3 credits. Offered 1, 2.

Formerly Property III. The real estate contract, adverse possession; adverse user; recording acts; deeds and their execution; covenants for title; after-acquired titles; covenants running with the land; creation of easements and profits; licenses.

LW. 510.—Fiduciary Administration I. 2 hours. 2 credits. Offered 1, 2.

Administration of decedents' estates and non-commercial trusts; steps in the administration of a decedent's estate, whether testate or intestate; powers of the executor, the administrator, and the trustee.

LW. 524.—Legal Accounting. 2 hours. 2 credits.

Basic patterns of business, corporate and tax accounting; accounting principles, procedures and statements; commercial practice and procedures related to judicial and administrative requirements. Designed for students with no previous accounting background.

LW. 552.—Abstracts. 2 hours. 2 credits. Offered 1, 2.

Abstracts of title; description of land; records of title in Florida; curative acts and limitations acts pertaining to defects of title; the formal requisites of conveyances in Florida; conveyances by married women; conveyances of homestead; conveyances by corporations; the lien of state and federal judgments; federal tax liens.

LW. 554.—Estates and Trusts II. 2 hours. 2 credits. Offered 2.

A continuation of LW. 410. Protection of the family of the transferor; admissibility and effect of extrinsic evidence; ademption, lapse and satisfaction; revocation of wills; termination of trusts.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

LW. 572.—Domestic Relations. 2 hours. 2 credits. Offered 1, 2.

Nature of contract to marry and of marriage; requisites for validity; annulment doctrines; divorce: causes, grounds, defenses, jurisdiction; economic and tort relations between spouses and parent and child.

LW. 574.—Advanced Equity. 2 hours. 2 credits. Offered 1.

Specific performance: nature of jurisdiction, the statute of frauds, part performance; rescission and reformation; equitable relief against unjust situations at law, including interpleader, accounting, bills quia timet, bills of peace, and class suits.

LW. 605.—Income Taxation. 2 hours. 2 credits. Offered 1, 2.

The fundamentals of federal income taxation; techniques of federal tax research.

LW. 606.—United States and Florida Constitutional Law. 3 hours. 3 credits. Offered 1.

Formerly "United States Constitutional Law II" and "Florida Constitutional Law." Comparision of United States and Florida constitutional law; more detailed study of concepts introduced in LW. 406; other federal powers; the bill of rights, boundaries, impairment of the obligations of contracts; eminent domain; impeachment; amendments; problems of overlap in state and federal control; current composition, role and operation of the Supreme Courts. The analysis of Florida constitutional law also includes the police power; general laws; special and local laws; population acts; the governor's powers of suspension and removal; types of administrative agencies; bases of county and municipal government; need for and status of constitutional revision.

LW. 607.—Pre-trial and Trial Procedure. 2 hours. 2 credits. Offered 1.

Formerly "Procedure III." Pre-trial procedure; depositions; discovery; trials; trials by court or by jury; dismissal of actions; motion for directed verdict; new trials.

LW. 608.—Conflict of Laws. 3 hours. 3 credits. Offered 1.

The considerations by which the forum determines the legal consequences in a case when one or more of the operative facts are connected with another state or country; concepts of domicile; jurisdiction; recognition and enforcement of foreign judgments; family law with emphasis upon jurisdictional problems of divorce; choice of law problems in selected fields, including torts, contracts, decedents' estates and property.

LW. 609.—Future Interests. 3 hours. 3 credits. Offered 2.

A study of testamentary and inter vivos transmissions of mixed assets to achieve defined results through differing periods of time and circumstance: conditional estates; gifts to classes; powers; rule against perpetuities; restraints on alienation.

LW. 612.—Legal Ethics. 1 hour. 1 credit. Offered 1, 2.

Responsibilities of the legal profession; Canons of Ethics of the American Bar Association; organization of the bar; current problems and activities of the legal profession.

LW. 623.—Corporate Finance. 2 hours. 2 credits.

Corporate financial structure; valuation and accounting; corporate merger, consolidation, purchase and sale of assets; holding company relationships; administration of surplus; stockholder distributions; federal security legislation and state blue sky laws.

LW. 624.—Corporate Reorganization. 2 hours. 2 credits. Offered 1.

Merger, consolidation, and termination of corporations; reorganization without judicial supervision; reorganization in equity and under Chapter X of the Bankruptcy Act; some federal tax aspects of reorganization.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

LW. 631.—Insurance. 2 hours. 2 credits. Offered 2.

Historical background; construction of contracts; the modern insurance code; insurance practice and litigation; employee benefit plans; business insurance, workmen's compensation.

LW. 632.—Creditors' Rights. 3 hours. 3 credits. Offered 1, 2.

Alternative remedies available to the unsecured creditor; conveyances in fraud of creditors; state insolvency proceedings and adjustment by agreement between debtor and creditors; the Federal Bankruptcy Act.

LW. 641.—Judgments and Appeals. 2 hours. 2 credits. Offered 2.

Formerly "Procedure IV." Analysis of the judgment; methods of review in Florida and federal practice; notice; assignments of error; records; technique of appellate briefing and oral argument; factors in estimating advisability of seeking review.

LW. 642.—Federal Jurisdiction. 2 hours. 2 credits. Offered 2.

Federal judicial system; civil jurisdiction; limitations on jurisdiction; application of state law; exclusive jurisdiction; concurrent jurisdiction; federal questions; diversity of citizenship; collusion among parties; judicial re-arrangement of parties; jurisdictional amount; joinder of separate claims; removal of suits from state courts; separable controversies; ancillary proceedings.

LW. 644.—Trial Techniques. 2 hours. 2 credits. Offered 2.

Formerly "Trial Practice." Selection of jury; instructions; trials; verdicts; directed verdicts; judgments.

LW. 651.—Fiduciary Administration II. 2 hours. 2 credits. Offered 1.

Problems of the fiduciary in the allocation of receipts and disbursements between principal and income in the administration of trusts and estates; the Uniform Principal and Income Act; apportionment of estate taxes.

LW. 653.—Mortgages. 2 hours. 2 credits. Offered 1, 2.

Formerly "Security Transactions." Real property mortgages: problems of creation; assignment; priorities; rights and duties of the parties; merger; foreclosures.

LW. 661.—Administrative Law. 2 hours. 2 credits.

Analysis of the administrative process with emphasis on: the reason for and validity of delegation; constitutional, statutory, judicial and agency-made rules of administrative procedure; methods and scope of judicial review of administrative action.

LW. 662.—Public Utilities. 3 hours. 3 credits. Offered 1.

Businesses affected with public interest; validity of governmental regulation; extent of duty to serve; excuses for failure to serve; abandonment of service; regulation of rates; computing the rate base; measures of value; property used and useful; intangibles involved; operating expenses; computing depreciation; preferences to classes and localities; discrimination in rates; extent of federal and state regulatory powers; corporate affiliations; regulation of holding companies.

LW. 663.—Labor Law. 3 hours. 3 credits. Offered 2.

Government protection and control of labor activities, such as picketing and strikes, and the means used, including the labor injunction; the framework of collective bargaining; the negotiation of collective agreements and their operation; the relation between the bargaining representative and individual employees.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

LW. 665.—Municipal Corporations. 2 hours. 2 credits. Offered 1.

Legal problems encountered in the conduct of government at the local level, principally municipal; types and nature of local units, their place in the governmental structure, their organization, personnel, powers, procedure, means of financing, and limitations; community planning.

LW. 667.—Trade Regulations. 2 hours. 2 credits.

Common law and statutory regulation of trade and industry; the restraint of trade and anti-trust laws.

LW. 668.—Unfair Trade Practices. 2 hours. 2 credits.

Unfair business practices at common law and under state and federal statutes; trade marks and trade names; false advertising; price discrimination; miscellaneous business torts.

LW. 669.—International Law. 2 hours. 2 credits. Offered 2.

Principles of international law as applied in international adjudication and arbitration and in American courts. Includes selected problems dealing with the sources, authority and application of international law; recognition; territory; nationality; jurisdiction; treaties; extradition; the United Nations and other international organizations.

LW. 671.—Admiralty. 2 hours. 2 credits. Offered 2.

Origin of admiralty jurisdiction; waters and craft; laws affecting maritime affairs; sovereign immunity; maritime liens; seamen's rights; carriage of goods; charter parties; towage; pilotage; salvage; general average; collisions, navigation rules, limitation of liability; marine insurance.

LW. 672.—Damages. 2 hours. 2 credits. Offered 2.

General principles; non-compensatory damages; forseeability; certainty; avoidable consequences; interest; value; problems dealing with specific wrongs, including torts and breach of contract; liquidated damages.

LW. 673.—Military Jurisprudence. 2 hours. 2 credits. Offered 1.

Military justice: relation of military to civilian authority; military crimes; procedural study of the Uniform Code of Military Justice, Military Affairs; boards of officers; military contracts; claims; legal assistance; concepts of international law as applied to land and aerial warfare.

LW. 675.—Office Practice. 2 hours. 2 credits.

The daily work of the lawyer in the conduct and management of a law office; instruction and practice in the drafting and preparation of contracts, deeds, mortgages, conditional sales, mechanics' liens, leases, wills, and other legal instruments.

LW. 677.—Patents and Copyrights. 2 hours. 2 credits.

Patentability; application for patent and proceedings thereon; construction and operation of letters patent; transfers, assignments, licenses and contracts; infringement. Common-law rights in literary property; works that may be copy-righted; requirements of securing and preserving copyright; renewal of copyright; title, transfers, licenses, and contracts; infringement.

LW. 679.—Restitution. 2 hours. 2 credits. Offered 1.

Restitutionary remedies at law and in equity, including quasi contract, equitable accounting, subrogation, constructive trust, and equitable lien; choice of remedies; restitution for benefits conferred through mistake, fraud, duress, or under contracts that are substantially unperformed, impossible to perform, or illegal.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

LW. 681.—Crime and Criminology Seminar. 2 hours. 2 credits.

Causes and prevention of crime; juvenile delinquency and the juvenile courts; probation and parole; crime detection and police methods; crime commissions; psychiatry and psychology in criminal law; trends in criminal court administration and penology; a study of the jury and the court in a criminal case; ethics in the practice of criminal law.

LW. 682.—Estates Planning Seminar. 2 hours. 2 credits. Offered 1, 2.

Objectives of lifetime and testamentary planning of estates; procedures for analysis of small and large estates; the elimination, mitigation and offsetting of adverse factors; corrective procedures and their implementation.

LW. 684.—Federal Taxation Seminar. 2 hours. 2 credits. Offered 1.

Advanced problems in federal income taxation.

LW. 686.—Labor Law Seminar. 2 hours. 2 credits. Prerequisite: LW. 663 or the permission of the instructor.

Problems in labor law and labor relations with emphasis in the fields of collective bargaining and arbitration. The work in this seminar is on an advanced level and is ordinarily available only to students who have completed the basic course in labor law.

LW. 688.—Practice Court. 2 hours. 2 credits. Offered 1, 2.

The preparation and trial of cases: pre-trial preparation; trial briefs; courtroom demeanor; steps in a jury trial including the selection of the jury, introduction of exhibits, direct and cross-examination, opening statements and closing arguments. Each member of the class participates as attorney in the trial of two assigned cases, civil and criminal, under simulated courtroom conditions with the professor or an outstanding member of the local bar as judge.

LW. 690.—Law Review. 1 credit per semester. Offered 1, 2.

Research, writing and editorial work in connection with the publication of *University of Florida Law Review.* Limited to students who have completed LW. 408 (or qualified transfer students) and whose average in all law courses attempted is at least 2.0 at each time law review work is undertaken.

LW. 691.—Advanced Legal Research. Variable credit. Offered 1, 2.

A specific attempt to relate the study of law to practice by modeling instruction upon law office methods. The program is conducted as individual projects. Current problems which are submitted by attorneys throughout the state, are used when available. The student is required to do individual research and to present his findings in the form of a legal memorandum. Emphasis is upon individual work and responsibility.

LW. 692.—Legal Philosophy Seminar. 1 hour. 1 credit. Offered 1, 2.

The schools of jurisprudence on justice and law; interrelation of law and development of individual, society and nation; practical objectives, nature, manifestation and the power of law in the field of human endeavor; law, judiciary and social control.

LW. 694.—Current Legal Problems Seminar. 2 hours. 2 credits.

Exploration of various legal problems of current significance leading to creative work on the part of the student in the form of a term paper.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

LW. 696.—Legislative Drafting Seminar. 2 hours. 2 credits. Offered 1.

Forms of legislative expression; relation of the statute to other types of law; types of statutes and requisites to passage; technique of bill-drafting, including delineation of problem, conferences with the client, types of background research and of materials available, organization of data, statutory phrascology and standard clauses; legislative organization and procedure. Each student participates in drafting bills of current practical interest.

LW. 698.—Comparative Commercial Law Seminar. 2 hours. 2 credits.

Sources of law in western European and Latin American countries; survey of their basic constitutional concepts and judicial systems; cases and readings on legal questions arising in commercial transactions with Latin-American countries.

LIBRARY SCIENCE

Instructional Staff 1956-57

West, S. L., Head; Disney, E. M., Hardaway, E., Knox, M. E., Prince, V. C., Sperry, J. A.

LY. 303 and LY. 304 form a six-hour sequence in library organization, but either course may be taken independently of the other. LY. 301 and LY. 304 are basic courses in library materials and their organization, and can be logically followed by either LY. 302 and LY. 430 or EH. 491 (Children's Literature), according to the student's interest.

LY. 200.—History of Books and Printing. 2 hours. 2 credits. Offered 1, 2.

The book and the invention of printing in the development of Western culture and society.

LY. 201.—Uses of Books and Libraries. 1 hour. 1 credit. Offered 1, 2.

Detailed study of the basic and most useful reference books and bibliographic aids. Practice problems in the use of specific titles and in how to find materials in the library will be given. Not for library science certification.

LY. 301.—Introduction to Library Materials. 3 hours. 3 credits. Offered 1.

Principles and methods of evaluating and selecting books and other library materials and their use for reference and instructional purposes.

LY. 302.—Basic Reference Materials. 3 hours. 3 credits. Prerequisite: LY. 301. Offered 2.

A study of the basic types of reference materials—encyclopedias, dictionaries, yearbooks, periodical indexes, bibliographies—with practice in the use of these materials toward a better understanding of basic research procedures.

LY. 303.—Library Administration. 3 hours. 3 credits. Offered 2.

A study of the objectives, functions and routines of libraries with special attention to library services and management in schools and other academic institutions.

LY. 304.—Organization of Library Materials. 3 hours. 3 credits. Offered 1.

Classroom and laboratory practice in the basic procedures of acquisition, preparation and processing of materials for library service in relation to the school and other agencies which the library serves.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

LY. 430.—Individual Work. 3 hours. 3 credits. Prerequisites: LY. 302 or LY. 304 and permission of the department head. Offered 1, 2.

By means of this course students may study for credit the special reference tools, bibliographic aids and important periodicals and books in the area of the Social Sciences, the Humanities, Science or Technology, and/or advanced procedures of acquisition, preparation and processing of materials for library service. With change of content, LY. 430 may be selected for additionl credit in subsequent sessions.

MATHEMATICS

Instructional Staff 1956-57

Kokomoor, F. W., Head; Ackerson, R. H., Awtrey, R. A., Blake, R. G., Butson, A. T., Cowan, R. W., Gager, W. A., Hadlock, E. H., Hutcherson, W. R., Lang, G. B., Lehman, E. H., Lewis, H. K., McInnis, S. W., Meacham, R. C., Meyer, H. A., Moore, J. T., Moore, T. O., Morales, J. A., Patterson, P. B., Phipps, C. G., Pirenian, Z. M., Rohde, F. V., Smith, C. B., Sobczyk, A., South, D. E.

MS. 105.—Basic Mathematics. 4 hours. 4 credits. Prerequisite: C-42, except for the superior group in mathematics. Offered 1, 2, 3.

In place of the traditional college algebra, trigonometry, and analytic geometry in succession, this course offers a sequence of topics including much of the above and some calculus. Thus the student will obtain early a working knowledge of such mathematics as is basic to the study of the sciences and other subjects. The choice of material is so made as to present mathematics as an integrated whole rather than as a series of segregated topics.

MS. 106.—Basic Mathematics. 4 hours. 4 credits. The second half of the course MS. 105-106. Offered 1, 2, 3.

MS. 208.—Business Mathematics. 3 hours. 3 credits. Prerequisite: C-42, except for the superior group in mathematics. Offered 1, 2, 3.

Not open to students who have had MS. 308, and not counted toward a mathematics major in the College of Arts and Sciences. Arithmetical, and some algebraic, treatment of the mathematical problems involved in business. Simple interest. Simple, bank, and trade discounts. Promissory notes, drafts, compound interest and related problems, partial payments, annuities, amortization, and other topics of the mathematics of business are treated.

MS. 225.—Arithmetic for Teachers. 3 hours. 3 credits. Prerequisite: C-42. Offered 1, 2, 3.

Not open to students who have completed more than two semesters of college mathematics, and not counted toward a mathematics major in the College of Arts and Sciences. Treatment of fundamental notions of arithmetic, with certain advanced ideas designed to throw light upon the beginning processes. Intended not only for teachers of arithmetic but also for teachers of other subjects in which familiarity with number processes is desirable.

MS. 226.—Algebra for Teachers. 3 hours. 3 credits. Prerequisite: C-42 or its equivalent.

Not counted toward a mathematics major in the College of Arts and Sciences. A thorough review of high school algebra, with some elementary treatment of the theory of equations.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MS. 308.—Mathematics of Finance. 3 hours. 3 credits. Prerequisite. One year of college mathematics.

An algebraic treatment of practical financial problems. Compound interest, annuities, bonds and contracts, depreciation and depletion, sinking funds and amortization of debts, and life insurance mathematics are studied. Somewhat more advanced and more theoretical than MS. 208, but not open for credit to students who have credit in MS. 208.

MS. 309.—Essential Mathematics for Applied Statistics. 3 hours. 3 credits. Prerequisite: C-42. Not available for mathematics major or graduate minor credit in Arts and Sciences. Offered 1.

Designed for the student who has some familiarity with elementary statistics. Its purpose is to insure a working knowledge of the basic mathematical operations which are essential to an understanding of the fundamental procedures in further statistical work.

MS. 310.—Statistical Methods. 3 hours. 3 credits. Prerequisite: MS. 106, MS. 309 or equivalent. Offered 1, 2, 3.

Presents the bases of the various procedures as well as practical computational methods. The statistics of frequency distributions; moments; normal curve; curve fitting; regression and correlation analysis. Introduction to Ch-square. Student's t and the F distributions.

MS. 311.—Advanced College Algebra. 3 hours. 3 credits. Prerequisite: MS. 106 or equivalent. Offered 1.

Further treatment of such topics as progression, theory of quadratic equations, permutations, combinations, probability, induction, binomial theorem, series, undetermined coefficients.

MS. 325.—Advanced General Mathematics. 3 hours. 3 credits. Prerequisite: C-42. Offered 1, 2, 3.

Continuation of the arithmetic and algebraic topics of elementary general mathematics with new material added. The deeper meaning of laws underlying number operations. Some properties of positive whole numbers. Higher functional analysis. Valuable to prospective teachers of mathematics and others who wish to continue some mathematical work without becoming specialists in pure mathematics.

MS. 326.—Advanced General Mathematics. 3 hours. 3 credits. Prerequisite: C-42. Offered 1.

The facts and processes of elementary Euclidean geometry, with the study of numerous generalizations of theorems and the manner in which geometry, algebra, trigonometry and analytic geometry are related. The nature of proof. Types of proof. Problems in geometric constructions. Inequalities. The locus idea treated both synthetically and analytically. Valuable to prospective teachers and to other students majoring in mathematics.

MS. 327.—Advanced General Mathematics. 3 hours. 3 credits. Prerequisite: MS. 325. Offered 1, 2, 3.

The general processes pursued in MS. 325 are continued, with special emphasis on analysis. The analytic treatment is applied extensively to algebraic, exponential, logarithmic, geometric, and trigonometric functions. The informal notions of the derivative and integral introduced in MS. 325 are applied throughout the course and extended as needed. Mathematics is presented throughout as a single whole, both in its effect on the material side of civilization and as a creative force in its own right. The sequence C-42, MS. 325, and MS. 327 constitutes a cultural approach to formal courses in the calculus.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MS. 353.—Differential Calculus. 4 hours. 4 credits. Prerequisite: MS. 106 or 327. Offered 1, 2, 3.

Differentiation and integration. Typical problems solved by these methods are calculation of rates of change, computation of areas, volumes, moments of inertia, energy, power, and many others. Various advanced topics of special value to engineers and scientists. Open to University College students.

MS. 354.—Integral Calculus. 4 hours. 4 credits. The second half of the course MS. 353-354. Prerequisite: MS. 353 or its equivalent. Offered 1, 2, 3.

MS. 385.—Advanced Trigonometry. 3 hours. 3 credits. Prerequisite: MS. 106 or 327. Offered 2.

The first part of the course explores special topics in plane trigonometric analysis. Then follows a development of the formulas relating to triangles formed by great circles on a sphere. Special overall emphasis is on spherical trigonometry.

MS. 400.—Mathematics for Teachers. 3 hours. 3 credits. Prerequisite: One full year of college mathematics or its equivalent in terms of course work or experience. Offered 2, 3.

This is in part a refresher in the fundamentals of secondary school mathematics and in part a course presenting cognate materials and techniques, both of classical and modern nature, as needed by the prospective teacher.

MS. 405.—Theory of Equations. 3 hours. 3 credits. Prerequisite: MS. 106 or 327. Offered 2, 3.

Theorems and methods of solution of equations of higher degree. Various methods of approximating solutions of numerical equations. Determinants; systems of linear equations. Symetric functions. Elimination, resultants, and discriminants.

MS. 411.—Survey of Modern Algebra. 3 hours. 3 credits. Prerequisite: MS. 106 or 327. Offered 2, 3.

An introduction to the simpler concepts of higher algebra. Number system, number theory, groups, rings, ideals, integral domains, fields, matrices, etc.

MS. 420.—Differential Equations. 3 hours. 3 credits. Prerequisite: MS. 354. Offered 1, 2, 3.

The classification, solution and application of various equations which contain expressions involving not only variables, but also the derivatives of these variables. Not open for credit to students who have taken MS. 521.

MS. 423.—Mathematics for Electrical Engineers. 3 hours. 3 credits. Prerequisite: MS. 354. Offered 1, 2.

For electrical engineering majors who do not take MS. 521 and MS. 522. Covers the more elementary aspects of differential equations and vector analysis, the Laplace transform, and other selected topics from advanced mathematics applicable to the field of electrical engineering. Not available for students who have credit for one or more of the courses MS. 420, MS. 521, and MS. 522 or their equivalents.

MS. 430.—Individual Work. 3 hours. 3 credits. Prerequisite: MS. 354 and permission of Head of Department. Offered 1, 2, 3.

For undergraduate work needed by the student and not obtainable in the regular course offerings.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MS. 431.—College Geometry. 3 hours. 3 credits. Prerequisite: MS. 326 or its equivalent. Offered 2, 3.

The use of elementary methods in the advanced study of the triangle and circle. Special emphasis on solving original exercises. Valuable to prospective high school and college geometry teachers.

MS. 455.—Intermediate Calculus. 3 hours. 3 credits. Prerequisite: MS. 354. Offered 2.

This course is designed to bridge the gap between the first course in the calculus and graduate courses. Topics included are: Limits, continuity, mean value theorem, indeterminate forms, the definite integral, partial differentiation, hyperbolic functions, infinite series, and expansion of functions.

MS. 460.—Graphical and Numerical Analysis. 2 hours and 2 hours laboratory. 3 credits. Prerequisite: MS. 354. Offered 2.

The graphical solution of special problems; the use of various kinds of graph paper; the construction and use of simple nomograms; numerical and graphical integration and differentiation; the use of mathematical tables and interpolation therein; the use of computing machines, the plainimeter, slide rules of special types; the preparation and arrangement of problems for computation.

MS. 463.—Quality Control. 3 hours. 3 credits. Prerequisite: MS. 354. Offered 1, 2.

A study of problems in the analyzing, planning, and interpreting of quantitative data arising from chemistry, physics, and engineering, together with the underlying statistical theory. Includes quality control, sequential analysis, statistical tests, and introduction to appropriate computing techniques.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

MS. 501.—Introduction to Mathematical Thought. 3 hours. 3 credits. Offered 1, 2, 3.

The anatomy of mathematics. The axiomatic method. Theory of sets. Transfinite arithmetic. The linear continuum and the real number system. Groups and their significance. Generalizations of classical mathematics. Mathematical philosophies.

MS. 510.—Mathematical Statistics. 3 hours. 3 credits. Offered 2, 3.

A study of the binomial distribution, De-Moivre-Laplace theorem, distribution functions, and moment-generating functions; frequency distribution of two variables; development and some applications of the Chi-square, Student's t and F distributions.

MS. 521.—Higher Mathematics for Engineers and Physicists. 3 hours. 3 credits. Prerequisite: MS. 354. The first third of the course MS. 521-522-523. Not open for credit to students who have taken MS. 420. Offered 1, 2, 3.

Ordinary differential equations with emphasis on numerical methods and series solutions; the Laplace transform; boundary value problems; orthogonal functions. The methods of vector analysis and special topics of partial differential equations, and the functions of a complex variable with applications.

MS. 522.—Higher Mathematics for Engineers and Physicists. 3 hours. 3 credits. Prerequisite: MS. 521 or MS. 420. The middle third of MS. 521-522-523. Offered 1, 2, 3.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MS. 523.—Higher Mathematics for Engineers and Physicists. 3 hours. 3 credits. Prerequisite: MS. 420, or 423, or MS. 521. The last third of MS. 521-522-523. Offered 1, 2, 3.

MS. 551.—Advanced Topics in Calculus. 3 hours. 3 credits. Offered 1, 3.

Topics of advanced nature selected from the calculus, including partial differentiation, Taylor's theorem, infinite series, continuation of simple multiple integrals, line and surface integrals, and Green's theorem.

MS. 552.—Advanced Topics in Calculus. 3 hours. 3 credits. The second half of the course MS. 551-552. Offered 2.

MS. 561.—Introduction to Topology. 3 hours. 3 credits. Prerequisite: MS. 354. Offered 1, 3.

Set theory; the real line, topological spaces; topological notions; Heine-Borel Theorem; mappings, continuous functions and homeomorphisms; Hausdorff spaces; metric spaces; the Euclidean spaces.

GRADUATE COURSES

Prerequisites to individual courses should be determined before registration by consultation with the instructor concerned through the Department office.

Some of the courses listed are offered regularly as indicated, while others are offered only as needed. For the complete listing of graduate courses for a given semester, consult the Schedule of Courses for that semester.

Advanced mathematics courses are not necessarily numbered according to their difficulty. The 700 courses are more specifically in some particular field.

Every graduate student is expected to attend an appropriate seminar and the regular colloquium.

Since times for offering courses are estimated a year in advance, certain changes may be made if needs are made known to the Department. For the complete listing for a given semester see the Schedule of Courses.

MS. 602.—Vector Analysis. 3 hours. 3 credits. Offered 1, 3.

The algebra and calculus of vectors in two and three dimensions. Applications to problems in physics and engineering.

MS. 603.—Introduction to Applied Mathematics. 3 hours. 3 credits. Offered 1.

Cartesian tensors, Hamilton's principle. Elasticity; compatible equations; equations of equilibrium; generalized Hooke's law; torsion problems; elastic waves. Perfect fluid: Continuity equation; Euler's equations of motion; potential flow; Blasius' theorem; Kutta-Joukowski theorem. Electrodynamics: Maxwell's equations; Poynting vector; coaxial cable; simple boundary value problems; Hertzian dipoles.

MS. 604.—Introduction to Applied Mathematics. 3 hours. 3 credits. The second half of MS. 603-604. Offered 2.

MS. 607.—Tensor Analysis. 3 hours. 3 credits. Offered 2.

A study of transformations of coordinates, matrices, and tensors. The calculus of tensors. Special attention to the application of tensors in differential geometry, differential equations, problems from physics, and n-dimensional Euclidean, Riemannian, and other spaces.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MS. 610. (Identical with PPY).—Mathematical Logic. 3 hours. 3 credits. Prerequisite: PPY. 320. Offered 2.

A detailed study of a single rigorous deductive system which provides a logical foundation for mathematics and an analysis of some of the basic concepts occurring in most language systems.

MS. 611.—Introduction to Higher Algebra. 3 hours. 3 credits. Offered 1.

An introduction to the theory of matrics, linear transformations; quadratic, bilinear, and Hermitian forms; equivalence of pairs of such forms; algebraic invariants and covariants.

MS. 612.—Introduction to Higher Algebra. 3 hours. 3 credits. The second half of the course MS. 611-612. Offered 2.

MS. 613.—Theory of Groups of Finite Order. 3 hours. 3 credits. Offered 1, 3.

Introduction to the group concept; a treatment of pure group-theory with numerous examples and a few of the simpler applications.

MS. 615.—Theory of Numbers. 3 hours. 3 credits. Offered 1.

General introduction to the theory of numbers; theorems on divisibility and congruences; quadratic residues and the reciprocity law; Disphantine equations; and binary quadratic forms.

MS. 619.—Statistical Theory I. 3 hours. 3 credits. Prerequisite: Calculus. Offered 1.

Elementary combinatorial probability theory; probability distributions; generating functions; mathematical expectation; limit theorems; multivariate normal distribution.

MS. 620.—Statistical Theory II. 3 hours. 3 credits. Prerequisite: Theory I. Offered 2.

Chi-square, t and F distributions; point and interval estimation; tests of hypotheses; analysis of variance; distribution-free methods.

MS. 621.—Numerical Analysis and Curve Fitting. 3 hours. 3 credits. Offered 1.

Method of least square; application to residuals; numerical differentiation and integration; smoothing gram polynomials. Numerical harmonic analysis. Similtaneous linear equations; determinates to matrices. Designed to acquaint research students in science with the theory and practice of computation including an introduction to stored programming techniques and auxilliary punched card equipment.

MS. 622.—Finite Difference and Interpolation. 3 hours. 3 credits. Offered 2.

The elements of the calculus of finite differences. Interpolation formulas. Inverse interpolation. Subtabulation of data, Numerical differentiation. Numerical integration. Summation in terms of integration and differentiation. Derivation of formulas from functional or recurrence relations. Special reference will be made to methods useful with modern computing equipment.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MS. 624.—Synthetic Projective Geometry. 3 hours. 3 credits. Offered 1, 3.

Pure geometry, dealing primarily with properties unaltered by the processes of projection and section; principal theorems involved; theory of poles and polars; ruled surfaces of second order; the theory of involution.

MS. 630.—Individual Work. 3 hours. 3 credits. Offered 1, 2, 3.

Under this number special work may be taken by graduate students.

MS. 634.—Analytic Projective Geometry. 3 hours. 3 credits. Offered 2.

Homogeneous coordinates are used in the analytic treatment of ranges, pencils, cross ratio, circle points at infinity, line and point coordinates, collineations, correlations, and involution.

MS. 636.—Foundation of Geometry. 3 hours. 3 credits. Offered 2, 3.

An investigation of the assumptions of geometry; the parallel postulate; steps leading to non-Euclidean geometrics; consequent development of modern branches of the subject; elements of non-Euclidean geometry, trigonometry, and calculus.

MS. 639.—Partial Differential Equations. 3 hours. 3 credits. Offered 1.

Origin of partial differential equations; solutions of linear equations of first order; Charpit and Jacobi's methods of solving non-linear equations of first order; simultaneous partial differential equations; solution of linear equations of second and higher orders by various methods; applications to geometry; Legendre polynomials; Bessel functions; numerous applications of the method of separation of variables to the solution of phyiscal problems.

MS. 640.—Fourier Series. 3 hours. 3 credits. Offered 2.

The application of trigonometric series to the solution of boundary-value problems of mathematical physics. Solutions are obtained to partial differential equations relating to the flow of heat, conduction of electricity and vibrating strings.

MS. 655.—Functions of a Complex Variable. 3 hours. 3 credits. Offered 1.

Fundamental operations with complex numbers; differentiation and integration theorems; mapping; transformations; series.

MS. 656.—Functions of a Complex Variable. 3 hours. 3 credits. The second half of the course MS. 655-656. Offered 2.

MS. 659.—Functions of Real Variables. 3 hours. 3 credits. Offered 1.

The real number system; theory of point sets; rigorous investigation of many questions arising in the calculus; Lebesque integrals; infinite series.

MS. 660.—Functions of Real Variables. 3 hours. 3 credits. The second half of the course MS. 659-660. Offered 2.

MS. 661.—General Topology. 3 hours. 3 credits. Offered 1.

Topological spaces; homeomorphisms and functions of sets; arcs and continuous curves; topological notions such as connectedness, compactness, separability, etc.; application to analysis.

MS. 662.—General Topology. 3 hours. 3 credits. The second half of the course MS. 661-662. Offered 2.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MS. 668.—History of Elementary Mathematics. 3 hours. 3 credits. Offered 1, 3.

A survey of the development of mathematics through the calculus, with special emphasis on the changes of the processes of operation and methods of teaching. No specific textbook is followed, but a number of works are used as reference.

MS. 690.—Special Topics in Mathematics. 3 hours. 3 credits. Offered 1, 2, 3.

Includes course work in topics not in sufficient demand to justify listing under separate numbering. Includes the following, and any other work needed in a doctoral program:

Abstract Analysis
Algebraic Topology
Analytic Number Theory
Banach Spaces and Algebras
Celestial Mechanics
Game Theory
Integral Equations
Linear Differential Equations
Metric Geometry
Numerical Analysis
Rings and Ideals
Theory of Groupoids
Theory of Infinite Groups
Vector Spaces

Students desiring courses such as the above should discuss their needs with the Department as early as possible so that classes can be arranged as may seem desirable.

MS. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

MS. 715.—Advanced Theory of Numbers. 3 hours. 3 credits. Prerequisite: MS. 615. Offered 2.

Continuation of the work of MS. 615. Indefinite binary quadratic forms; composition and genera of binary quadratic forms; quadratic forms in n variables; tenary quadratic forms; reduced positive tenary forms and tables.

MS. 725.—Econometrics. 3 hours. 3 credits. Offered 1.

The mathematical interpretation of economic hypotheses. Conclusions reached by mathematical treatment and procedure. Mechanism for the comparison of conclusions with observations. This course is concerned with the method of dealing mathematically with the material of economics, rather than with the validity of the hypotheses and laws involved.

MS. 726.—Econometrics. 3 hours. 3 credits. The second half of the course MS. 725-726. Offered 2.

MS. 727.—Lattice Theory. 3 hours. 3 credits. Offered 1.

Theory of partially ordered sets and lattices. The notion of lattice as a unifying principle in modern mathematics. Duality, modularity, and distributivity. Boolean algebras, lattice ordered algebras. Applications to arithmetic, algebra, group theory, set theory, topology, analysis, and ergodic theory.

MS. 728.—Lattice Theory. 3 hours. 3 credits. The second half of the course MS. 727-728. Offered 2.

MS. 741.—Hydrodynamics. 3 hours. 3 credits. Offered 1.

Cartesian tensors. Lagranian and Eulerian coordinates. Continuity equations; equations of motion. Ideal fluid; irrotational motion; velocity potential. Two-dimensional motion of ideal liquid. Theorems of Blasius and Joukowski. Airfoils. Free stream lines. Problems in three dimensions. Vortex motion. Wakes and jets. Viscous flows. Compressible flows.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MS. 742.—Hydrodynamics. 3 hours. 3 credits. The second half of the course MS. 741-742. Offered 2.

MS. 743.—Differential Geometry. 3 hours. 3 credits. Offered 1.

An introduction to the local study of so-called Riemannian and non-Riemannian spaces.

MS. 745.—Mathematical Theory of Elasticity. 3 hours. 3 credits. Offered 1.

Analysis of strain; analysis of stress; elasticity of solid bodies; general theorems of elasticity; two-dimensional elastic systems; bending of beams and plates; torsion; problems concerning the equilibrium of rods and plates.

MS. 746.—Mathematical Theory of Elasticity. 3 hours. 3 credits. The second half of the course MS. 745-746. Offered 2.

MS. 747.—The Mathematical Theory of Plasticity. 3 hours. 3 credits.

Physical facts. Dislocation theory. Elastic-plastic analysis of truss structures; collapse; shakedown. Plastic torsion; deformation theories; flow theories; warping; work hardening. General stress-strain laws; yield criteria. Plane strain theory; shear-line field properties; hyperbolic differential equations; discontinuance solutions: Limit analysis; upper and lower bounds for collapse state. Plastic wave propagation. Creep. Fatigue.

MS. 748.—The Mathematical Theory of Plasticity. 3 hours. 3 credits. The second half of MS. 747-748.

MS. 753.—Calculus of Variations. 3 hours. 3 credits. Offered 2.

Introductory theory and application of the calculus of variation. The problem of the shortest arc, quickest descent, minimum surface and the least area enclosed by a curve of a given length are treated. Applications using Hamilton's Principle and Lagrange's equations.

MS. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2, 3.

MECHANICAL ENGINEERING

Instructional Staff 1957-58

Reed, J. C., Head; Bourke, N., Bennett, J. D., Bussell, W. J., Jr., Farber, E. A., Crowe, M. O'L., Flanigan, F. M., Gonzalez, J. O. Jr., Lewis, E. H., Patterson, E. P., Pennington, C. W., Reichert, S. O., Samuel, J. A., Scott, L. A., Smith, W. O., Tiffin, W. T., Zmeskal, O.

ML. 283.—Elementary Design. 2 hours and 3 hours drawing. 3 credits. Prerequisite: EGR. 282. Offered 1, 2.

The construction of industrial machine drawings. The application of the principles of mechanism in the design of simple machinery, and the use of standard machine parts.

ML. 381.—Elementary Heat Power. 3 hours. 3 credits. Prerequisites: MS. 354, PS. 206. Offered 1, 2.

For *students not majoring in Mechanical Engineering.* The fundamentals of steam power plants, internal combustion engines, and compressed air machinery.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ML. 384.—Metallography and Heat Treatment. 2 hours and 3 hours laboratory. 3 credits. Prerequisite: CG. 361 or CY. 402. Offered 1, 2, 3.

The crystal structure of ferrous and non-ferrous metals and their alloys; the iron-carbon diagram, heat treatment, and the use of steel and cast iron. Keyser, *Basic Engineering Metallurgy.*

ML. 385.—Thermodynamics I. 3 hours. 3 credits. Prerequisites: MS. 354, PS. 206, CY. 218. Offered 1, 2, 3.

Energy equations and availability of energy; gases, vapors, and mixtures; engineering applications in flow of fluids, vapor power cycles. Mooney, *Mechanical Engineering Thermodynamics.* Keenan & Keyes, *Thermodynamic Properties of Steam.*

ML. 387.—Mechanical Laboratory I. 1 hour and 3 hours laboratory. 1 credit. Corequisite: ML. 385. Offered 1, 2, 3.

Preparation of engineering reports, computation aids, the measurement of area, speed, pressure, temperature and gas flow. Sweeney, *Measurement Techniques in Mechanical Engineering.*

ML. 390.—Thermodynamics II. 3 hours. 3 credits. Prerequisite: ML. 385. Offered 1, 2.

Fuels and combustion; heat transfer; vapor power cycles; steam engines, steam and gas turbines; internal combustion cycles; gas compression; refrigeration cycles. Mooney, *Mechanical Engineering Thermodynamics.* Keenan & Keyes, *Thermodynamic Properties of Steam.*

ML. 473.—Seminar. 1 hour. 1 credit. Offered 1, 2.

Presentation of papers on current developments in mechanical engineering.

ML. 474.—Seminar. 1 hour. 1 credit. The second half of the course ML. 473-474. Offered 1, 2.

ML. 481.—Internal Combustion Engines. 3 hours. 3 credits. Prerequisite: ML. 385. Offered 1, 2.

Gas and liquid fuels, internal combustion engines and gas turbines. Automotive, aircraft, and Diesel power plants. Obert, *Internal Combustion Engines.*

ML. 482.—Refrigeration and Air Conditioning. 3 hours. 3 credits. Prerequisite: ML. 390. Offered 1, 2.

Refrigerating and air conditioning apparatus and their applications to the industrial, commercial and residential fields. Jennings and Lewis, *Air Conditioning and Refrigeration,* 3rd Edition. A. C. and RMA, *"Properties of Commonly Used Refrigerants."*

ML. 483.—Internal Combustion Engine Laboratory. 1 hour and 3 hours laboratory. 1 credit. Prerequisite: ML. 387; Corequisite: ML. 481. Offered 1, 2.

Testing of lubricants, gasoline, automobile engines, aircraft engines, and high and low speed Diesel engines. Obert, *Internal Combustion Engines.*

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ML. 484.—Refrigeration and Air Conditioning Laboratory. 1 hour and 3 hours laboratory. 1 credit. Prerequisite: ML. 387; Corequisite: ML. 482. Offered 1, 2.

Tests of an ammonia refrigeration system, freon direct expansion air conditioner, air washer air conditioner, fans, the study of pneumatic and electric controls and air distribution. A. S. M. E. and A. S. H. & V. E., *Test Codes. Laboratory Instructions.*

ML. 486.—Power Engineering. 3 hours. 3 credits. Prerequisites: ML. 390, EM. 313. Offered 1, 2.

Steam and Diesel engine power plants and their auxiliary equipment. Remp, *Fundamentals of Power Plant Engineering.*

ML. 488.—Mechanical Laboratory II. 1 hour and 3 hours laboratory. 1 credit. Prerequisite: ML. 387. Corequisite: ML. 486. Offered 1, 2.

Analysis of fuels, heating value, flue gas analysis, and the testing of boilers, turbines, engines and steam plant auxiliary apparatus. *Laboratory Instructions.* Moyer, *Power Plant Testing.*

ML. 489.—Manufacturing Operations I. 2 hours and 3 hours laboratory. 3 credits. Prerequisite: U.D. Classification. Offered 1, 2, 3.

Machinery, materials, and processes used in manufacturing. Subjects covered include inspection, gages and instruments, gage design and application, jigs, fixtures, design and application, and production, using machine tools with application of handbook data. Schaller, *Engineering Manufacturing Methods.*

ML. 490.—Manufacturing Operations II. 2 hours and 3 hours laboratory. 3 credits. Offered 1, 2.

Machinery, materials and processes used in manufacturing. Subjects covered include sand casting, die casting, forging, blanking, welding, cutting and inspection of casting and weldments by magnaflux and X-ray. Schaller, *Engineering Manufacturing Methods.*

ML. 491.—Machine Design I. 3 hours and 3 hours drawing. 4 credits. Prerequisites: ML. 281, EM. 366, EM. 367. Offered 1, 2.

Stress analysis of machine elements, design procedure, design of machine elements. Spotts, *Design of Machine Elements.*

ML. 493.—Principles of Mineral Engineering. 3 hours lecture and 3 hours laboratory. 4 credits. Prerequisites: GY. 210, Engineering Geology: CG. 443, Chemical Engineering Laboratory. Offered 1.

Methods of open-pit, strip, placer and hydraulic mining, and engineering layout of operations. Geological and geophysical methods of prospecting for mineral deposits, drilling methods, sampling, crushing, various ore concentration methods, economic evaluations and management practices.

ML. 510.—Nuclear Power Reactors. 3 hours. 3 credits. Prerequisite: ML. 400 or acceptable equivalent. Offered 1.

A study of various types of nuclear reactors used for power generation. Problems of design and construction. Materials of construction and their particular importance in nuclear reactors. Heat transfer and cooling systems in nuclear reactors .

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ML. 530.—Thermodynamics for Nuclear Engineers. 3 hours. 3 credits. Prerequisites: 1 year physics and 1 year chemistry. Offered 1, 2.

Fundamental concepts, laws, properties of fluids, characteristics of gases, the flow of fluids, vapor power cycles, turbines, gas and turbine power cycles.

ML. 570.—Metallurgy for Nuclear Engineers. 3 hours. 3 credits. Prerequisites: one year each of college chemistry, physics, and mathematics. Offered 1, 2.

The crystalline nature of metals, principles of alloying, diffusion in metals and alloys, hardening of metals and alloys, solid state metallurgy, corrosion, reactor materials.

ML. 592.—Machine Design II. 3 hours or equivalent. 3 credits. Prerequisite: ML. 491. Offered 1, 2.

Advanced problems in design, and the design of a complete machine.

ML. 593.—Mechanical Design. 3 hours. 3 credits. Offered 1.

Special problems in design.

ML. 594.—Mechanical Design. 3 hours. 3 credits. The second half of the course ML. 593-594. Offered 2.

GRADUATE COURSES

Though no graduate major may be completed without adequate course work on the 600 level, certain undergraduate courses in Mechanical Engineering are available for graduate credit as a part of a candidate's major. These are: ML. 592—Machine Design II; ML. 593-594—Mechanical Design.

ML. 652.—Thermodynamics of Fluid Flow I. 3 hours. 3 credits. Prerequisite: ML. 390. Offered 1.

In this course the laws of mechanics, thermodynamics and heat transfer are combined to give more general relationships for the solution and better understanding of actual flow phenomena.

ML. 653.—Thermodynamics of Fluid Flow II. 3 hours. 3 credits. Prerequisite: ML. 652. The second half of the course ML. 652-653. Offered 2.

ML. 655.—Advanced Heat Transfer I. 3 hours. 3 credits. Prerequisites: MS. 521, MS. 522, or consent of instructor. Offered 1.

General equations of heat transfer, properties of matter significant in heat transfer, conduction with heat sources and sinks, similarity between thermal and dynamical transfer in convection, advanced theories and analysis of evaporation and condensation.

ML. 656.—Advanced Heat Transfer II. 3 hours. 3 credits. Prerequisite: ML. 655. The second half of the course ML. 655-656. Offered 2.

ML. 671.—Advanced Physical Metallurgy I. 3 hours. 3 credits. Prerequisite: ML. 384 or CY. 402. Offered 1.

Equilibrium; theory of alloys; free energy of alloy phases; ternary phase diagrams; diffusion in metals; metal interfaces; nucleation and growth processes; martensitic transformations; and order-disorder change.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ML. 672.—Advanced Physical Metallurgy II. 3 hours. 3 credits. Prerequisite: ML. 671. The second half of the course ML. 671-672. Offered 2.

ML. 673.—X-ray Metallography. 2 hours and 3 hours laboratory. 3 credits. Prerequisite: ML. 384. Offered 1.

Fundamentals of X-ray tubes; X-ray spectra; elements of crystallography; diffraction of X-rays by crystals; Laue, rotating crystals and powder methods; determination of crystal structure; stereographic projection; pole figures and orientation determination; determination of constitution diagrams with X-rays; stress measurements by X-rays; age hardening and transformations; plastic deformation; preferred orientations from cold work and from annealing.

ML. 681.—Vibrations. 3 hours. 3 credits. Prerequisites: EM. 366, ML. 491. Offered 1.

Study of exciting forces and frequencies, resonant and forced vibration; linear and torsional vibrating systems; one, two and three mass systems, multi-mass systems and their natural frequencies; systems of one to six degrees of freedom; vibration absorbers; vibration dampers; and methods of analysis to determine harmonic frequencies and amplitudes, effect of hysteresis, etc. Freberg and Kembler, *Elements of Mechanical Vibrations.*

ML. 682.—Advanced Mechanisms and Kinematics. 2 hours and 3 hours laboratory. 3 credits. Prerequisite: ML. 491. Offered 2.

Study of forces and stresses in machines produced by inertia and accelerations. Governors, flywheels, brakes, clutches and gyroscopic action are studied. Ham and Crane, *Mechanics of Machinery.*

ML. 683.—Mechanical Research I. Variable credit. Prerequisite: ML. 483-484. Offered 1, 3.

Research projects in Mechanical Engineering.

ML. 684.—Mechanical Research II. Variable credit. The second half of the course ML. 683-684. Prerequisite: ML. 683. Offered 2, 3.

ML. 685.—Advanced Air Conditioning. 3 hours. 3 credits. Prerequisite: ML. 482. Offered 2.

Design, estimation of systems, plans and specifications.

ML. 686.—Advanced Engineering Thermodynamics. 3 hours. 3 credits. Prerequisite: ML. 390. Offered 1.

The general equations of thermodynamics and their applications; advanced study of combustion processes.

ML. 687.—Advanced Refrigeration. 3 hours. 3 credits. Prerequisite: ML. 482. Offered 1.

The design of commercial refrigeration systems, selection of apparatus, and engineering design economics.

ML. 689.—Advanced Mechanical Laboratory I. 3 hours. 3 credits. Prerequisite: ML. 483-484. Offered 1, 3.

Experimental projects in Mechanical Engineering.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ML. 690.—Advanced Mechanical Laboratory II. 3 hours. 3 credits. The second half of the course ML. 689-690. Offered 2, 3.

ML. 691.—Gas Turbines and Jet Engines. 3 hours. 3 credits. Prerequisite: ML. 481. Offered 2.

The gas turbine as applied to stationary, locomotive and marine power plants. The gas turbine as applied to aircraft power plants. Other reaction motors; such as, the pulse jets, continuous jets, and rockets are considered.

ML. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

MEDICINE

Instructional Staff 1956-57

Harrell, George T., Dean; Anton, Aaron H., Beach, Robert O., Beaudoin, Allan R., Birzis, Lucy; Crampton, Charles F., Edwards, Joshua L., Ellner, Paul D., Fregly, Melvin J., Fried, Melvin, Gennaro, Joseph F., Gifford, George, Goodman, Donald C., Hood, C. Ian, Koch, Arthur L., Leibman, Kenneth C., Maren, Thomas H., Martin, Samuel P., Nechay, Bohdon R., Odor, D. Louise, Olson, James A., Otis, Arthur B., Putnam, Frank W., Ritchie, Alfred E., Suter, Emanuel, Wilson, James G., Wright, Ernest B.

MED. 501.—Gross Anatomy. 2 hours and 8 hours laboratory. 5 credits. Offered 1.

The macroscopic structure and mechanics of the human body are taught primarily in the dissecting laboratory but supplemented with demonstrations, conferences and lectures as needed. Applied and correlative aspects are emphasized.

MED. 502.—Gross Anatomy. 2 hours and 8 hours laboratory. 5 credits. A continuation of MED. 501. Offered 2.

MED. 503.—Microscopic Anatomy. 2 hours and 6 hours laboratory. 4 credits. Offered 1.

The microscopic structure of the cells, tissues and organs of the human body, exclusive of the central nervous system and organs of special sense, are taught. The correlation of structure and function is strongly emphasized. Fresh tissues are used when profitable and each student is issued a loan collection of prepared slides. The more recent advances in knowledge of cellular structure, acquired by the use of the electron microscope and of other instruments, will be included.

MED. 504.—Neuroanatomy. 2 hours and 6 hours laboratory. 4 credits. Prerequisite: MED. 503. Offered 2.

The gross and microscopic structure of the human central nervous system and organs of special sense are taught. Functional and applied aspects are emphasized. Electron microscopy of nerve tissue will be included.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MED. 511.—Biochemistry. 4 hours and 12 hours laboratory. 8 credits. Prerequisites: Chemistry (including qualitative analysis); one year of organic chemistry with laboratory. A course in analytical chemistry is also advised. Offered 1.

The chemistry, metabolism and regulation of body constituents are taught. The student is introduced to: (1) proteins, carbohydrates, and lipids and to the physical chemistry of body processes; (2) enzymes, problems of energy transfer, intermediary metabolism of dietary and cell constituents, and endocrine action; (3) concepts of acid-base balance and physiological chemistry as reflected in health and disease.

MED. 522.—Human Physiology. 4 hours and 12 hours laboratory. 8 credits. Offered 2.

Principles of physiology as applied to the human are taught. Mechanisms, regulations and integrations involved in the functioning of the various tissues and organ systems of the body are studied.

MED. 531.—Introduction to Medicine. 3 hours lecture and conference. 2 credits. Offered 1.

Principles of human biology as applied to disease states are introduced. This includes variability, genetics and embryology. Cellular, tissue, somatic and psychic growth and development are taught. Factors leading to abnormal trends will be emphasized.

MED. 532.—Introduction to Medicine. 3 hours lecture and conference. 2 credits. A continuation of MED. 531. Offered 2.

MED. 533.—Introduction to Medicine. 6 hours lecture and laboratory. 4 credits. Offered 1.

The student is introduced to the case method in medicine, including exercises in interviewing techniques, the dynamics of interpersonal relationships of the physician, and adjustive techniques of the patient.

MED. 534.—Introduction to Clinical Methods. 6 hours and 12 hours laboratory. 6 credits. Prerequisite: satisfactory completion of the first three semesters of medical school. Offered 2.

Physical diagnosis, pathogenesis of symptons, correlation of basic sciences and clinical sciences, laboratory medicine including clinical microscopy and diagnostic bacteriology are studied.

MED. 551.—Microbiology. 4 hours and 12 hours laboratory. 8 credits. Prerequisites: MED. 503 and 511. Offered 1.

Bacterial physiology, parasitology, virology and basic aspects of host-parasite relations are introduced. Pathogenesis of infectious diseases and of mechanisms involved will be discussed with emphasis on infections in man.

MED. 560.—Pharmacology. 4 hours and 4 hours laboratory. 6 credits. Prerequisite: satisfactory completion of the first three semesters of medical school, except by special permission. Offered 2.

The effects of drugs (chemicals) on living systems are studied. Chief emphasis is laid on those drugs used in the treatment of disease; biochemical and physiological principles underlying their use are stressed as a background for their later application in clinical medicine.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MED. 561.—General Pathology. 3 hours and 12 hours laboratory. 7 credits. Prerequisites: MED. 503, 511, 522 or equivalent. Offered 1.

The fundamental mechanisms of pathogenesis, through the full range of human diseases are studied. Laboratory exercises, demonstrations and seminars are correlated with each other and a concurrent series of lectures. Active participation in a number of complete human autopsy studies is required.

MED. 562.—Systemic Pathology. 3 hours and 12 hours laboratory (8 weeks). 4 credits. Prerequisites: MED. 501-502-503, 511, 522, 561. Offered 2.

The pathological changes involved in human disease processes and their relationship to the clinical course of disease are surveyed by systems. This course will be correlated with MED. 572.

MED. 567.—Therapeutics. 2 hours. 2 credits. Prerequisite: MED. 560. Offered 1.

The principles of pharmacology as they apply to the therapy of human disease are taught. Specific therapeutic problems at a clinical level are discussed.

MED. 570.—Experimental Medicine. 3 hours and 6 hours laboratory. 5 credits. Prerequisites: MED. 551, 561 and 560. Offered 2.

The experimental method in basic problems of medical science is introduced. Original projects submitted by students or participating departments will be carried out.

MED. 581.—Basic Clinical Clerkship. 8 hours and 25 hours clinic. 10 credits. Prerequisite: MED. 534.

Common modalities of patient care in all fields of medicine are introduced. All wards of the Teaching Hospital will be used.

MED. 583.—Introduction to Ambulant Medicine. 8 hours and 25 hours clinic (8 weeks). 10 credits. Prerequisite: MED. 534. Offered 1.

Patient care in the general clinic and ambulant ward is begun under intense supervision of the clinical staff. The role of environmental and preventable factors in disease will be stressed. The student will be taught the importance of community facilities in the care of patients. All clinical departments will participate.

MED. 584.—General Outpatient Clerkship. 8 hours and 25 hours clinic. 18 credits. Prerequisite: MED. 581. Offered 1, 2, 3.

Patient care in the general clinic under the tutorage of the clinical staff is continued. The student will follow his patients with the staff in The Health Center for the period of time necessary to handle the patients' problems. All resources of the University will be used.

MED. 585.—Special Ward Clerkship. 8 hours and 25 hours clinic. 18 credits. Prerequisite: MED. 584. Offered 1, 2, 3.

Patient care on medical, surgical, pediatric, obstetric and psychiatric services is studied. The student works with patients, attends teaching rounds, conferences, and clinics.

MED. 586.—Special Ward Clerkship. 8 hours and 25 hours clinic (8 weeks). 10 credits.

The second half of MED. 585.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MED. 587.—Preceptorship. Fulltime for 6 weeks. 6 credits. Prerequisite: MED. 584. Offered 1, 2, 3.

The student will work with a carefully selected practicing physician in a local community in the state observing problems of medical care and the application of principles to the practice of medicine.

MED. 605.—Research Methods in Anatomy. 1 to 3 credits. Prerequisites: MED. 501, MED. 503. Offered 1, 2, 3.

The student acquires proficiency in one or more of the research techniques used in histochemistry, radiation biology, experimental embryology, teratology, experimental neurology or electron microscopy under direct supervision of an experienced staff member.

MED. 606.—Anatomy Seminar. 1 hour. 1 credit. Required of graduate students in anatomy; open to others by special arrangement. Offered 1, 2, 3.

Research reports and discussions of current research literature are given by departmental staff and graduate students.

MED. 612.—Physical Biochemistry. 3 hours. 3 credits. Offered 2. (1957 and alternate years).

The physical chemistry and molecular structure of proteins, nucleic acids, enzymes and low molecular weight metabolites are studied. Biochemical methods, isotopic tracer techniques, biological kinetics and thermodynamics, ion interactions, absorption, and active transport are covered.

MED. 614.—Advanced Intermediary Metabolism. 3 hours. 3 credits. Offered 2 (1958 and alternate years).

The current and comparative aspects of intermediary metabolism of nitrogen, carbohydrate and fat are covered. Bio-organic mechanisms of enzyme action, the endocrines, metabolic balance and disease are included.

MED. 615.—Introduction to Biochemical Research. 12 laboratory hours. 4 credits. Offered 1, 2, 3.

MED. 616.—Biochemistry Seminar. 1 hour. 1 credit (may be repeated). Offered 1, 2, 3.

MED. 623.—Nerve-Muscle Physiology. 2 hours (plus some laboratory time). 2 credits. Offered 1 (1957 and alternate years).

Bioelectrical phenomena in nerve and muscle, including experimental and theoretical analysis of nerve and muscle impulses are studied. Comparative physiology of nerve and muscle, study of muscle mechanics and the chemistry of muscle contraction are included.

MED. 624.—Respiration and Circulation. 2 hours. 2 credits. Offered 2 (1958 and alternate years).

Special and current topics in respiratory and circulatory physiology are covered in seminars.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MED. 625.—Body Temperature Regulation. 2 hours. 2 credits. Offered 1 (1958 and alternate years).

The comparative physiology of temperature regulation, hibernation, heat exchange in mammals, neural and endocrine aspects of temperature regulation, hypo- and hyperthermia, adaptation to heat and cold, and limits of tolerance to heat and cold will be covered in seminars. Some laboratory work will be involved.

MED. 626.—Recent Advances in Physiology. 2 hours. 2 credits. Offered 2.

The detailed content of this seminar course will vary from year to year, but will cover recent advances in selected areas of physiology.

MED. 627.—Research Methods in Physiology. 0 to 4 credits. Offered 1, 2, 3.

The special needs of each individual student will be met by conferences and laboratory work.

MED. 628.—Seminar in Physiology. 1 hour. 1 credit. Offered 1, 2.

MED. 630.—Research in Medical Sciences: Anatomy, Biochemistry, Microbiology, Pathology, Pharmacology and Physiology. 0 to 6 credits. Offered 1, 2, 3.

MED. 652.—Advanced Virology. 2 hours and 6 hours laboratory. 4 credits. Offered 2.

Selected topics on modern concepts of the nature of viruses and the mechanism of viral infections, chosen from the field of animal, bacterial and plant viruses, will be discussed.

MED. 653.—Mechanisms of Infection and Resistance. 2 hours and 6 hours laboratory. 4 credits. Offered 2.

Selected topics on advanced bacteriology, immunochemistry and experimental pathology, will be covered through readings, laboratory work and conferences.

MED. 654.—Microbiology Seminar. 1 hour. 1 credit. Offered 1, 2, 3.

Reading assignments on selected topics in microbiology including bacterial physiology, immunology, virology and mycology will be discussed. Original research work will be presented.

MED. 670.—Topics in Pharmacology. 0 to 3 credits.

Seminars and informal conferences will be held, with a particular view toward the use of drugs in biochemical, physiological, anatomical and bacteriological investigations.

MED. 699.—Research and Master's Thesis. Anatomy, Biochemistry and Physiology. 0 to 6 credits. Offered 1, 2, 3.

MED. 799.—Research and Doctoral Dissertation. Anatomy, Biochemistry, Microbiology and Physiology. 0 to 12 credits. Offered 1, 2, 3.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

METEOROLOGY

Instructional Staff 1956-57

Williamson, R. C., Head; Bunting, D. C.

MTY. 200.—General Meteorology. 3 hours. 3 credits. Prerequisite: C-21 or one year of physics. Offered 2.

A brief descriptive course presenting in an elementary manner the basic principles of modern meteorology, and designed to give the student an insight into the physical processes underlying the phenomena of weather and climate. It is to satisfy the interested curiosity of the general student as well as to furnish a background useful to the practicing amateur weatherman.

MILITARY SCIENCE

AIR FORCE R.O.T.C.

Instructional Staff 1956-57

Rhudy, Ralph, Col., PAS and Military Coordinator; Blackburn, R. M., Capt.; Gillespie, S. E., Capt.; Killgore, E. H., Lt. Col.; Pope, B. C., Jr., Lt. Col.; Rockwood, Wm. P., Lt. Col.; Timberlake, W. B., Jr., Capt; Wellman, F. D., Jr., Capt.; Manze, M., Maj.; Crown, J. L., Capt.; Lewis, K. P., Capt.; White, R. C., Jr., 1st Lt.

MAF. 101.—First-Year Air Force ROTC. 4 hours. 1 credit.

The first half of the course MAF. 101-102. The course begins with the introduction to AFROTC then continues on to the introduction to aviation, fundamentals of global geography and leadership and drill.

MAF. 102.—First-Year Air Force ROTC. 4 hours. 1 credit.

The second half of the course MAF. 101-102. The course will emphasize international tensions and security organizations and the military instruments of national security as well as leadership and drill. The course will be given in a series of lectures followed by a discussion group. Emphasis will be on the historical aspects of the growth of international tensions and security organizations and on the growth of the military instruments of national security.

MAF. 201.—Second-Year Air Force ROTC. 4 hours. 1 credit.

The first half of the course MAF. 201-202. Introduction to Second-Year Air Force ROTC, elements of aerial warfare which include targets, weapons, various types aircraft, the air ocean, air bases, and air operations. Careers in the United States Air Force and leadership laboratory.

MAF. 202.—Second-Year Air Force ROTC. 4 hours. 1 credit.

The second half of the course MAF. 201-202.

MAF. 301.—Third-Year Air Force ROTC. 6 hours. 2 credits.

The first half of the course MAF. 301-302. The Air Force Commander and his Staff, problem solving techniques, the communications process and Air Force correspondence, military law and boards, applied air science including aerial navigation and weather. Air Force base functions and leadership laboratory.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MAF. 302.—Third-Year Air Force ROTC. 6 hours. 2 credits.

The second half of the course MAF. 301-302.

MAF. 401.—Fourth-Year Air Force ROTC. 6 hours. 2 credits.

The first half of the course MAF. 401-402. Principles of leadership and management, career guidance, military aspects of World Political Geography, military aviation and the art of war, briefing for commissioned service and leadership laboratory.

MAF. 402.—Fourth-Year Air Force ROTC. 6 hours. 2 credits.

The second half of the course MAF. 401-402.

MILITARY SCIENCE
ARMY R.O.T.C.

Instructional Staff 1956-57

Kreidberg, M. A., Col., PMST; Ream, E. E., Lt. Col., Exec.; Means, R. E., Lt. Col.; Barr, W. H., Maj.; Dunks, F., Maj.; Horton, P. N., Maj.; Cox, C. B., Jr., Capt; Dornbush, L. W., Capt.; Ernst, H. O., Jr., Capt.; Mossy, R. J., Capt.; Simmons, F. R., Capt.; Stephens, W. C., Capt.; Williams, E. T., Capt.; Campbell, V. J., CWO, W-4.

MAR. 101.—First-Year Army ROTC. 4 hours. 1 credit.

The first half of the course MAR. 101-102. Organization of the ROTC; Individual Weapons; Leadership, Drill and Command; American Military History.

MAR. 102.—First-Year Army ROTC. 4 hours. 1 credit.

The second half of the course MAR. 101-102.

MAR. 201.—Second-Year Army ROTC. 4 hours. 1 credit.

The first half of the course MAR. 201-202. Leadership, Drill and Command; Map and Aerial Photo Reading; Crew-served Weapons and Gunnery.

MAR. 202.—Second Year Army ROTC. 4 hours. 1 credit.

The second half of the course MAR. 201-202.

MAR. 301.—Third-Year Army ROTC. 6 hours. 2 credits.

The first half of the course MAR. 301-302. Exercise of Command; Leadership; Military Teaching Methods; Organization, Function and Mission of the Arms and Services; Small Unit Tactics and Communications.

MAR. 302.—Third-Year Army ROTC. 6 hours. 2 credits.

The second half of the course MAR. 301-302.

MAR. 401.—Fourth-Year Army ROTC. 6 hours. 2 credits.

The first half of the course MAR. 401-402. Exercise of Command; Operations; Logistics; Military Administration and Personnel Management; Service Orientation.

MAR. 402.—Fourth-Year Army ROTC. 6 hours. 2 credits.

The second half of the course MAR. 401-402.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MUSIC

Instructional Staff 1956-57

Bolles, R. S., Head; Bachman, H. B., Beecher, A. A., Boatright, C. A., Danburg, R. L., Lawrenson, R. E., Lupkiewicz, J. V., Murphree, C. L., Nachenberg, S., Park, J. F., Paul, O. F., Poole, R., Preodor, E. C., Schmidt, D. T., Sterrett, D. E., Waldo, T. R., Wirtala, A. E.

Courses offered in the Department of Music are divided into five areas: Theory; History, Literature, and Appreciation; Applied; Music Education; Ensemble. Enrollment is open to all University students—those preparing for a professional goal in music and those seeking a musical literacy for its cultural worth alone.

Students registering for Applied Music courses (voice or instrumental lessons) are required to pay an additional fee. Lesson and practice room schedules will be arranged through the office of the Head of the Department.

All credit in Applied Music is determined by examination. A minimum of 3 hours weekly practice is required in courses numbering under 100. A minimum of 6 hours weekly practice is required in courses numbering over 100. All Applied Music courses are offered 1, 2, 3.

Students registering for Applied Music for the first time in the University must register for the lowest number designated for that subject and for 1 semester hour credit, unless a placement examination has been taken prior to registration.

Theory

MSC. 100
MSC. 101
MSC. 102
MSC. 201
MSC. 202
MSC. 303
MSC. 304
MSC. 305
MSC. 306
MSC. 307
MSC. 308
MSC. 403

MSC. 404
MSC. 405

History, Literature and Appreciation

MSC. 210
MSC. 211
MSC. 212
MSC. 213
MSC. 214

MSC. 311
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MSC. 313
MSC. 314
MSC. 315
MSC. 410
MSC. 411
MSC. 412
MSC. 413

*Applied

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Music Education

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MSC. 161
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MSC. 360
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MSC. 365
MSC. 366
MSC. 460
MSC. 461

Ensemble

MSC. 170
MSC. 171
MSC. 172
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MSC. 177
MSC. 178
MSC. 179

*Students registering for Applied Music may receive training through class instruction.

MSC. 21.—Piano Class. 1 credit.

MSC. 25.—Voice Class. 1 credit.

MSC. 27.—String Class. 1 credit.

MSC. 35.—Woodwind Class. 1 credit.

MSC. 43.—Brass Class. 1 credit.

MSC. 51.—Percussion Class. 1 credit.

MSC. 100.—Fundamentals of Music. 3 hours. 3 credits. Not offered 1957-58.

The components of music.

MSC. 101.—Theory of Music. 2 hours, and 3 hours laboratory. 3 credits. Offered 1.

Rhythms, intervals, motifs, phrases, melodies, chords, and chord progressions through listening, reading, playing, singing, and writing. The chord study includes all primary and secondary triads through the dominant seventh.

MSC. 102.—Theory of Music. 2 hours, and 3 hour laboratory. 3 credits. The second half of the course MSC. 101-102. Offered 2.

MSC. 121.—Piano. 2 credits.

MSC. 122.—Piano. 2 credits.

MSC. 123.—Organ. 2 credits.

MSC. 124.—Organ. 2 credits.

MSC. 125.—Voice. 2 credits.

MSC. 126.—Voice. 2 credits.

MSC. 127.—Violin. 2 credits.

MSC. 128.—Violin. 2 credits.

MSC. 129.—Viola. 2 credits.

MSC. 130.—Viola. 2 credits.

MSC. 131.—Cello. 2 credits.

MSC. 132.—Cello. 2 credits.

MSC. 133.—String Bass. 2 credits.

MSC. 134.—String Bass. 2 credits.

MSC. 135.—Flute. 2 credits.

MSC. 136.—Flute. 2 credits.

MSC. 137.—Clarinet. 2 credits.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MSC. 138.—Clarinet. 2 credits.

MSC. 139.—Oboe. 2 credits.

MSC. 140.—Oboe. 2 credits.

MSC. 141.—Bassoon. 2 credits.

MSC. 142.—Bassoon. 2 credits.

MSC. 143.—French Horn. 2 credits.

MSC. 144.—French Horn. 2 credits.

MSC. 145.—Cornet. 2 credits.

MSC. 146.—Cornet. 2 credits.

MSC. 147.—Trombone. 2 credits.

MSC. 148.—Trombone. 2 credits.

MSC. 149.—Tuba. 2 credits.

MSC. 150.—Tuba. 2 credits.

MSC. 151.—Percussion. 2 credits.

MSC. 152.—Percussion. 2 credits.

MSC. 160.—Music Skills. 3 hours. 3 credits. Offered 1, 2, 3.

Fundamentals of music needed by the classroom teacher for teaching music in the elementary school.

MSC. 161.—Music for the Elementary Child. 3 hours. 3 credits. Prerequisite: MSC. 160 or equivalent. Offered 1, 2, 3.

MSC. 161 is a state certification requirement for teaching in the elementary schools. Principles, problems, and procedures relative to the teaching of music by the classroom teacher in the elementary school.

MSC. 162.—Introduction to Music Education. 2 hours. 2 credits. Not offered 1957-58.

An overview of the nature and scope of music education in elementary and secondary schools with special reference to conditions in Florida.

MSC. 170.—University Orchestra. 3 hours. 1 credit. Offered 1, 2, 3.

Standard orchestra literature.

MSC. 171.—Choral Union. 3 hours. 1 credit. Offered 1, 2, 3.

A mixed chorus. Study and performance of large choral works.

MSC. 172.—Men's Glee Club. 3 hours. 1 credit. Offered 1, 2.

Performance of standard male chorus repertoire.

MSC. 173.—Women's Glee Club. 3 hours. 1 credit. Offered 1, 2.

Performance of standard repertoire for women's voices.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MSC. 174.—University Band. 3 hours. 1 credit. Offered 1, 2, 3.

Performance of standard band literature.

MSC. 175.—Choral Ensemble. 3 hours. 1 credit. Offered 1, 2.

For advanced voice students interested in singing in male quartets, mixed quartets for women's sextets.

MSC. 176.—Woodwind Ensemble. 3 hours. 1 credit. Offered 2.

For advanced woodwind players interested in playing woodwind ensemble literature.

MSC. 177.—String Ensemble. 3 hours. 1 credit. Offered 2

For advanced string players interested in playing string trio and string quartet literature.

MSC. 178.—Brass Ensemble. 3 hours. 1 credit. Offered 2.

For advanced brass instrument players interested in the study of brass quartet and brass quintet literature.

MSC. 179.—Piano Ensemble. 3 hours. 1 credit. Not offered 1957-58.

For advanced students of piano interested in duo-piano playing or accompanying.

MSC. 201.—Theory of Music. 3 hours, and 3 hours laboratory. 3 credits. Prerequisite: MSC. 102. Offered 1.

A continuation of MSC. 101-102. More difficult rhythms, intervals, phrases, melodies, chords, and chord progressions through listening, reading, playing, singing, and writing. The chord study includes secondary sevenths, altered chords and modulation.

MSC. 202.—Theory of Music. 3 hours, and 3 hours laboratory. 3 credits. The second half of the course MSC. 201-202. Offered 2.

MSC. 210.—Music Appreciation. 1 hour, and 3 hours laboratory. 2. credits. Offered 1, 2, 3.

A study through group listening and discussion, to expand the student's understanding of music literature.

MSC. 211.—Early Romantic Literature. 2 hours. 2 credits. Not offered 1957-58.

Standard music literature written by the leading composers of the period including: Beethoven, Schubert, Schumann, Mendelssohn, Berlioz.

MSC. 212.—Later Romantic Literature. 2 hours. 2 credits. Not offered 1957-58.

Standard music literature written by the leading composers of the period, including: Brahms, Franck, Wagner, Tschaikowsky, Strauss, Mahler.

MSC. 213.—Church Music. 2 hours. 2 credits. Offered 1.

Instrumental church music with special emphasis on organ literature suitable for the various religious services.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MSC. 214.—Church Music. 2 hours. 2 credits. Offered 2.

For the choir director or minister of music. Choral literature used in the various religious services.

MSC. 221.—Piano. 2 credits.

MSC. 222.—Piano. 2 credits.

MSC. 223.—Organ. 2 credits.

MSC. 224.—Organ. 2 credits.

MSC. 225.—Voice. 2 credits.

MSC. 226.—Voice. 2 credits.

MSC. 227.—Violin. 2 credits.

MSC. 228.—Violin. 2 credits.

MSC. 229.—Viola. 2 credits.

MSC. 230.—Viola. 2 credits.

MSC. 231.—Cello. 2 credits.

MSC. 232.—Cello. 2 credits.

MSC. 233.—String Bass. 2 credits.

MSC. 234.—String Bass. 2 credits.

MSC. 235.—Flute. 2 credits.

MSC. 236.—Flute. 2 credits.

MSC. 237.—Clarinet. 2 credits.

MSC. 238.—Clarinet. 2 credits.

MSC. 239.—Oboe. 2 credits.

MSC. 240.—Oboe. 2 credits.

MSC. 241.—Bassoon. 2 credits.

MSC. 242.—Bassoon. 2 credits.

MSC. 243.—French Horn. 2 credits.

MSC. 244.—French Horn. 2 credits.

MSC. 245.—Cornet. 2 credits.

MSC. 246.—Cornet. 2 credits.

MSC. 247.—Trombone. 2 credits.

MSC. 248.—Trombone. 2 credits.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MSC. 249.—Tuba. 2 credits.

MSC. 250.—Tuba. 2 credits.

MSC. 251.—Percussion. 2 credits.

MSC. 252.—Percussion. 2 credits.

MSC. 260.—Music Education in the Elementary School. 3 hours. 3 credits. Prerequisite: MSC. 162. Offered 1.

Fundamental principles and procedures of music education in the elementary school.

MSC. 261.—Instrumental Music in the Public Schools. 3 hours. 3 credits. Not offered 1957-58.

Problems, procedures and materials used in developing the instrumental program in the elementary and intermediate schools.

MSC. 262.—Community Music. 2 hours. 2 credits. Prerequisite: MSC. 202. Not offered 1957-58.

Techniques, procedures and materials used in building advanced community music programs with special emphasis on program building and administration.

MSC. 303.—Form and Analysis. 2 hours. 2 credits. Prerequisite: MSC. 202. Not offered 1957-58.

Analysis of the form and harmony employed in standard musical compositions.

MSC. 304.—Form and Analysis. 2 hours. 2 credits. The second half of the course MSC. 303-304.

The second half of the course MSC. 303-304. Not offered 1957-58.

MSC. 305.—Band Arranging. 2 hours. 2 credits. Prerequisite: MSC. 202 or equivalent. Offered 1.

Arranging for band instruments, including a study of range, transposition and tone color.

MSC. 306.—Orchestration. 2 hours. 2 credits. Prerequisite: MSC. 202 or equivalent. Offered 2.

Range, tone color, use, and adaptability of the instruments of the orchestra. Arranging for ensembles of various combinations up to and including the standard symphony orchestra.

MSC. 307.—Vocal Composition. 2 hours. 2 credits. Prerequisite: MSC. 202 or permission of the instructor. Not offered 1957-58.

Formation of accompaniment figures and principles of modulation. Study of the rhetorical principles of poetry and music. Writing in the simpler song forms.

MSC. 308.—Instrumental Composition. 2 hours. 2 credits. Prerequisite: MSC. 202 or permission of the instructor. Not offered 1957-58.

Practice in original music writing for solo instruments.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MSC. 311.—Classic Literature. 2 hours. 2 credits. Not offered 1957-58.

Standard music literature written by the leading composers of the period, with special emphasis on Haydn and Mozart.

MSC. 312.—Pre-Classic Literature. 2 hours. 2 credits. Not offered 1957-58.

Standard music literature written by the leading composers of the period, including: Dufay, Palestrina, Monteverde, Purcell, Bach, Handel.

MSC. 313.—Orchestra Literature. 2 hours. 2 credits. Not offered 1957-58.

A chronological study of standard orchestra literature beginning with Haydn.

MSC. 314.—Opera Literature. 2 hours. 2 credits. Not offered 1957-58.

A chronological study of standard opera repertoire with special emphasis on the Italian, French, and German schools.

MSC. 315.—Latin-American Music. 2 hours. 2 credits. Offered 1.

Representative works of the leading composers of Latin-America. Emphasis is placed on appreciation and understanding rather than on formal analysis.

MSC. 321.—Piano. 2 credits.

MSC. 322.—Piano. 2 credits.

MSC. 323.—Organ. 2 credits.

MSC. 324.—Organ. 2 credits.

MSC. 325.—Voice. 2 credits.

MSC. 326.—Voice. 2 credits.

MSC. 327.—Violin. 2 credits.

MSC. 328.—Violin. 2 credits.

MSC. 329.—Viola. 2 credits.

MSC. 330.—Viola. 2 credits.

MSC. 331.—Cello. 2 credits.

MSC. 332.—Cello. 2 credits.

MSC. 333.—String Bass. 2 credits.

MSC. 334.—String Bass. 2 credits.

MSC. 335.—Flute. 2 credits.

MSC. 336.—Flute. 2 credits.

MSC. 337.—Clarinet. 2 credits.

MSC. 338.—Clarinet. 2 credits.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MSC. 339.—Oboe. 2 credits.

MSC. 340.—Oboe. 2 credits.

MSC. 341.—Bassoon. 2 credits.

MSC. 342.—Bassoon. 2 credits.

MSC. 343.—French Horn. 2 credits.

MSC. 344.—French Horn. 2 credits.

MSC. 345.—Cornet. 2 credits.

MSC. 346.—Cornet. 2 credits.

MSC. 347.—Trombone. 2 credits.

MSC. 348.—Trombone. 2 credits.

MSC. 349.—Tuba. 2 credits.

MSC. 350.—Tuba. 2 credits.

MSC. 351.—Percussion. 2 credits.

MSC. 352.—Percussion. 2 credits.

MSC. 360.—Music Education in the Secondary School. 3 hours. 3 credits. Prerequisite: MSC. 162. Offered 3.

Fundamental principles and procedures of music education in the junior and senior high schools.

MSC. 361.—Choral Materials Laboratory. 2 hours, and 3 hours of laboratory. 3 credits. Not offered 1957-58.

The study and performance of the repertoire used in secondary school choral organizations.

MSC. 362.—Orchestra Materials Laboratory. 2 hours, and 3 hours of laboratory. 3 credits. Not offered 1957-58.

The study and performance of the repertoire used in school orchestras.

MSC. 363.—Projects and Problems in Music. 2 hours, and 3 hours laboratory. 3 credits. May be taken for credit without MSC. 364. Offered 1, 3.

For the advanced student who wishes some help in the problems of teaching music in an individual situation.

MSC. 364.—Projects and Problems in Music. 2 hours, and 3 hours laboratory. 3 credits. The second half of the course MSC. 363-364. May be taken for credit without MSC. 363. Offered 2, 3.

MSC. 365.—Survey of Orchestral and Band Instruments. 2 hours, and 3 hours laboratory. 3 credits. Offered 2.

An introductory survey of orchestral and band instruments.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MSC. 366.—Music in the Field of Recreation. 3 hours. 3 credits. Offered 2.

The various uses of music in the field of recreation.

MSC. 403.—Counterpoint. 2 hours. 2 credits. Prerequisite: MSC. 202. Not offered 1957-58.

Free and strict counterpoint through listening, reading, playing, singing, and writing.

MSC. 404.—Counterpoint. 2 hours. 2 credits. The second half of the course MSC. 403-404. Not offered 1957-58.

MSC. 405.—Conducting. 3 hours. 3 credits. Prerequisite: Eight credits in one area of applied music or permission of the instructor. Not offered 1957-58.

Basic techniques of choral and instrumental conducting.

MSC. 410.—Impressionistic Literature. 2 hours. 2 credits. Not offered 1957-58.

Standard music literature written by the leading composers of the period, with special emphasis on Debussy and Ravel.

MSC. 411.—Contemporary Literature. 2 hours. 2 credits. Not offered 1957-58.

Standard music literature written by the leading composers of the period, including: Stravinsky, Schoenberg, Hindemith, Bartok.

MSC. 412.—Survey of Music History. 2 hours. 2 credits. Offered 1.

A detailed study of the history of music with emphasis on its relationship to the history of man.

MSC. 413.—Survey of Music History. 2 hours. 2 credits. The second half of course MSC. 412-413. Offered 2, 3.

MSC. 421.—Piano. 2 credits.

MSC. 422.—Piano. 2 credits.

MSC. 423.—Organ. 2 credits.

MSC. 424.—Organ. 2 credits.

MSC. 425.—Voice. 2 credits.

MSC. 426.—Voice. 2 credits.

MSC. 427.—Violin. 2 credits.

MSC. 428.—Violin. 2 credits.

MSC. 429.—Viola. 2 credits.

MSC. 430.—Viola. 2 credits.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

MSC. 431.—Cello. 2 credits.

MSC. 432.—Cello. 2 credits.

MSC. 433.—String Bass. 2 credits.

MSC. 434.—String Bass. 2 credits.

MSC. 435.—Flute. 2 credits.

MSC. 436.—Flute. 2 credits.

MSC. 437.—Clarinet. 2 credits.

MSC. 438.—Clarinet. 2 credits.

MSC. 439.—Oboe. 2 credits.

MSC. 440.—Oboe. 2 credits.

MSC. 441.—Bassoon. 2 credits.

MSC. 442.—Bassoon. 2 credits.

MSC. 443.—French Horn. 2 credits.

MSC. 444.—French Horn. 2 credits.

MSC. 445.—Cornet. 2 credits.

MSC. 446.—Cornet. 2 credits.

MSC. 447.—Trombone. 2 credits.

MSC. 448.—Trombone. 2 credits.

MSC. 449.—Tuba. 2 credits.

MSC. 450.—Tuba. 2 credits.

MSC. 451.—Percussion. 2 credits.

MSC. 452.—Percussion. 2 credits.

MSC. 460.—Band Materials Laboratory. 2 hours, and 3 hours laboratory. 3 credits. Offered 2.

The study and performance of the repertoire used in school bands.

MSC. 461.—School Music Administration. 3 hours. 3 credits. Offered 1.

Fundamental principles and problems of organization and administration of city, county and state school music systems.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

NUCLEAR ENGINEERING

Instructional Staff 1956-57

Forsman, M. E., Coordinator; Collier, R. M., Duncan, J. M., Fagen, W. F., Farber, E. A., Gilcreas, F. W., Greathouse, G. A., Lackey, J. B., Lear, W. E., Muschlitz, E. E., Teller, A. J., Tiffin, W. T., Wethington, J. A., Wilcox, D. B., Zimpfer, W. H., Zmeskal, O.

NR. 400.—Introduction to Nuclear Engineering. 3 hours. 3 credits. Prerequisite: PS. 317 or equivalent. Offered 1, 2.

A study of fission and chain reaction, plutonium production, nuclear reactor principles, types and design. Materials for reactor construction, shielding, radiation hazards and waste disposal. Nuclear power, propulsion of submarines, ships, aircraft and rockets.

NR. 431.—Introduction to Heat Transfer and Fluid Flow. 3 hours. 3 credits. Prerequisites: PS. 206, MS. 354. Offered 1.

A study of the physical properties of materials important in energy transfer cacula-tions, dimensional analysis, and momentum and heat transfer by conduction, convection, and radiation mechanisms. It is intended as a foundation course in these fields. McAdams, HEAT TRANSFER.

GRADUATE AND ADVANCED UNDERGRADUATE COURSES

The following courses may be used for major or minor credit toward a graduate degree.

NR. 501.—Radiation Processes. (Identical with CY. 501.) 2 hours and 3 hours laboratory. 3 credits. Prerequisite: CY. 402. Offered 1.

Photochemistry; chemical and physical effects caused by ionizing radiation. Radiation synthesis, catalysts, food sterilization, use of high intensity sources in the process industries.

NR. 535.—Radiological Safety Engineering. 2 hours. 2 credits. Laboratory to be scheduled irregularly, substituting 3 hours laboratory for 1 hour lecture. Prerequisites: PS. 321, PS. 519. Offered 1, 2.

Primarily for students of nuclear engineering. Interaction of radiation with matter; detection, measurement, and shielding of radiation; operations and problems in radiological safety; maximum permissible limits; and disposal of radioactive wastes.

NR. 600.—Nuclear Engineering Laboratory. 3 hours. 1 credit. Prerequisites: PS. 317, NR. 400. Offered 1, 2.

Laboratory practice in the theory and use of equipment and processes necessary in the field of nuclear engineering. Experiments include absorption of beta and gamma rays, scattering and absorption of neutrons, thermal neutron capture cross sections, shielding experiments, moderation of neutrons in graphite, critical mass determinations on annular core with various geometric and uranium concentration, determination of heat generation in irradiated uranium, loop studies, control rod calibrations, irradiations of fuel elements to get internal flux distributions, analog simulators for design and operation of reactor control systems, separation of uranium, thorium, Sr^{90}, etc., from fission products, radiation chemistry-ionizing radiation effects on chemical systems and others.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

NR. 603.—Advanced Radiation Processes. 3 hours. 3 credits. Prerequisite: NR. 501 or equivalent.

Advanced radiation chemistry for the research workers in this field and for nuclear engineers. A study of the interaction of ionizing radiation with solids, liquids, gases, and biological systems.

NR. 610.—Survey of Reactor Analysis. 3 hours. 3 credits. Prerequisites: NR. 400 or equivalent; MS. 521. Offered 1, 2.

This course gives an introduction to the theory of reactor analysis. A considerable number of simplifying assumptions are made to reduce the mathematical treatment and emphasize the underlying physical ideas and the results of the analyses which have been fruitful in the development of reactors. Numerical examples are used to illustrate the application of basic principles. Glasstone and Edlund, THE ELEMENTS OF NUCLEAR REACTOR THEORY.

NR. 612.—Problems of Nuclear Radiation in Environmental Sanitation. 2 hours and 3 hours laboratory, or equivalent. 3 credits. Prerequisites: NR. 535, CL. 525, CY. 560, or consent of instructor. Offered 2.

The treatment and disposal of radioactive substances—gaseous, liquid, solid. Effects on sewage treatment, stream sanitation and water treatment. Sterilizing action toward bacteria and other microorganisms. Procedures for monitoring of discharges of radioactive materials. Use of radioactive isotopes in tracing pollution and flow patterns in streams and treatment processes.

NR. 620.—Design of Nuclear Plants. 1 hour lecture and 6 hours laboratory. 3 credits. Offered 1.

This course represents the culmination of the curriculum in nuclear engineering. The theories of reactor analysis, energy and mass transfer, shielding, material requirements, heat generation, economics and others obtained in previous courses will be applied to an analytical design of an integrated nuclear plant. Glasstone, PRINCIPLES OF NUCLEAR REACTOR ENGINEERING; Rockwell, REACTOR SHIELDING DESIGN MANUAL.

NR. 632.—Nuclear Processing and Separations I. 3 hours. 3 credits. Prerequisites: CG. 355 and NR. 400. Offered 1.

Chemical processing of fertile and fissile materials, study of isotope separations, chemical processing of irradiated fuel, power plant cycles, a study of the use of reactors as integrated energy sources for chemical plants. Bruce, Fletcher, Hyman and Katz, PROCESS CHEMISTRY; Cohen and Murphy, THE THEORY OF ISOTOPES SEPARATION.

NR. 633.—Nuclear Processing and Separations II. 3 hours. 3 credits. Prerequisite: NR. 632. Offered 2.

Advanced courses in extraction of uranium and thorium. Radiochemical separation processes; reactor fuel dissolution; chemical principles of radio-chemical solvent extraction processes; wet processes for radiochemical separations; separations of uranium with hexafluoride and other chemicals; isotope production and fission product treatment. Bruce, Fletcher, Hyman and Katz, PROCESS CHEMISTRY.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

NR. 634.—Engineering Practice School. 6 hours. 6 credits. Offered 1, 2.

The Engineering Practice School at Oak Ridge and the Argonne Laboratory curriculum in Nuclear Engineering are available for qualified graduate students in any department, subject to security clearance by the Atomic Energy Commission. Under the direction of the staffs of these laboratories, the courses emphasize the application of engineering principles to the solution of problems, and they are designed to develop initiative, resourcefulness, and cooperative effort in large-scale industrial operation.

NR. 636.—Nuclear Seminar. 1 hour. 1 credit. Offered 1, 2.

Discussions on topics in fields of graduate study and research. Guest speakers will be utilized as a part of this seminar program.

NR. 640.—Special Nuclear Materials. 3 hours. 3 credits. Prerequisites: ML. 400, CY. 402, MS. 521, others. Offered 1, 2.

A study of special materials at high temperatures and high pressures in the presence of nuclear radiation. Materials of construction for high temperature reactors. Chemical reactions at high temperatures. Study of concentrated solution and slurry chemistry in molten metals and molten salts.

NR. 650.—Shielding and Heat Generation. 3 hours. 3 credits. Prerequisites: NR. 400, MS. 523. Offered 1 or 2.

This course presents an analytical study of the art of shield design and the problem of heat generation and distribution in reactor components.

NR. 651.—Reactor Technology. 3 hours. 3 credits. Prerequisite: NR. 610. Offered 1 or 2.

An analysis of reactor systems by comparison of actual performance to design specifications. Consideration of design decisions, the reasons for them and the results achieved.

NR. 675.—Reactor Metallurgy I. 3 hours lecture. 3 credits. Prerequisite: ML. 384. Offered 1 or 2.

Metallic materials for shielding coolant, fuel, structures, control, moderator and reflector. Nuclear property requirements. Production, melting and shaping of uranium, thorium, zirconium and titanium. Alloy systems. Relation of crystal structure and microstructure to physical properties, mechanical properties, and corrosion. Stainless steels, nickel, alloys, aluminum, magnesium, molybdenum, beryllium, boron steel, liquid metals. Radiation damage.

NR. 676.—Reactor Metallurgy II. 2 hours lecture and 3 hours laboratory. 3 credits. Prerequisite: ML. 675. Offered 1 or 2.

The second half of the course ML. 675-676, with a full semester of laboratory sessions. The laboratory will provide an opportunity for firsthand study of the technology of nuclear metals and the special methods needed as well as a study of some of their properties.

NR. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

NR. 711.—Nuclear Reactor Theory I. 3 hours. 3 credits. Prerequisites: MS. 522 and NR. 610. Pre- or corequisite: PS. 612. Offered 1.

An advanced course on the theory of reactor analysis. Detailed mathematical treatment of neutron scattering and capture, diffusion theory, chain reactions, and moderator theory as applied to nuclear reactors. Charpie, Horowitz, Hughes and Tittler, Vol. I of PROGRESS IN NUCLEAR ENERGY; Holmes and Meghreblian, NOTES ON REACTOR ANALYSIS.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

NURSING

NSG. 101.—Introduction to the Nursing Profession. 3 hours. 3 credits. Open to University College students; a required course for nursing students. Offered 1, 3.

An introductory course in nursing to give students a broad understanding and appreciation of the growth and development of the nursing profession.

NSG. 111.—Introduction to Nursing Functions. 3 hours. 3 credits. Open to University College students; a required course for nursing students. Offered 2, 3.

An exploration of the role of the nurse in health promotion and care of the sick. Introduction to nurse-patient and nurse-co-worker relationships, and to professional communication techniques.

NSG. 221.—Nursing Skills Laboratory. 12 hours laboratory. 4 credits. Offered 1. Prerequisite: NSG. 111.

A course designed to provide opportunities for nursing students to work with selected patients in order to develop the basic manual and interpersonal skills of nursing. Includes conferences and discussion periods to help students develop principles of nursing care and to evaluate their skills in meeting the needs of patients.

NSG. 230.—Medical and Surgical Nursing. 3 hours and 15 hours laboratory. 8 credits. Offered 2. Prerequisites: NSG. 111 and NSG. 221.

This course is concerned with the knowledge and understanding essential to the nursing care of patients with general medical and surgical conditions. Emphasis is placed on the social, economic and psychological factors as they relate to prevention of disease, to illness and to health restoration. Various aspects of therapy are discussed, including drug and diet therapy. The laboratory includes clinics and conferences as well as practice in the care of selected patients in the hospital and outpatient clinics.

NSG. 321.—Patient Centered Nursing. 3 hours. 3 credits.

Open to licensed professional nurses only. Designed to broaden the graduate nurse's concept of the scope of nursing care. Emphasis on nursing skills and techniques, both manual and interpersonal, as means of providing needed care rather than as ends in themselves.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

ORNAMENTAL HORTICULTURE

Instructional Staff 1956-57

E. W. McElwee, Head; Baggett, D. A.; Nutter, G. C.; Parvin, P. E.; Watkins, J. V.

OH. 200.—Flowers and Plants for the Home. 2 hours, and 2 hours laboratory. 3 credits. Offered 1.

A service course for non-majors dealing with the adaptability, culture, and use of flowers and foliage plants in and around the home. Textbook: Noble and Merkel, *Plants Indoors.*

OH. 203.—Introduction to Ornamental Horticulture. 2 hours, and 2 hours laboratory. 3 credits. Offered 1.

A course designed to give a general insight into the specialized fields of ornamental horticulture, including geographic distribution of production, economic importance, principles, and practices used in the production and use of floricultural, nursery crops, and turf crops.

OH. 217.—Plant Propagation. 2 hours, and 2 hours laboratory. 3 credits. Corequisite: BTY. 101-102. Offered 1.

Principles, practices in the propagation of ornamental plants, by seedage, cuttage, budding, grafting, division, and other methods. Textbook: Kains and McQuesten, *Propagation of Plants.*

OH. 319.*—Maintenance of Ornamental Trees and Shrubs. 2 hours, and 2 hours laboratory. 3 credits. Prerequisites: BTY. 101-102, SLS. 301-302. Offered 1.

A study of factors influencing growth, transplanting, fertilizing, pruning; cabling and cavity treatment. Textbook: Pirone, *Maintenance of Shade and Ornamental Trees.*

OH. 329.—Landscape Gardening. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite BTY. 101-102 or permission of instructor. Offered 1.

The use of ornamental plants in the development of small home and school grounds. Laboratory periods are devoted to identification of plants, preparing arrangement plans, and maintenance of landscape plantings. Textbook: Korbobo: *The Complete Landscape.*

OH. 331.—Woody Plant Materials.** 1 hour, and 4 hours laboratory. 3 credits. Prerequisites: BTY. 101-102 and OH. 203 or permission of the instructor. Offered 1.

The identification, growth characteristics, requirements, and use of trees, palms, shrubs and vines in landscape plantings.

OH. 332.—Woody Plant Materials.** 1 hour, and 4 hours laboratory. 3 credits. Prerequisites: OH. 331. Offered 2.

A continuation of OH. 331 with emphasis on tropical and sub-tropical plants.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.
*Offered 1957-58 and in odd years.
**Offered 1958-59 and in even years.

OH. 352.—Garden Management.** 2 hours and 2 hours laboratory. 3 credits. Prerequisite OH. 329 or permission of instructor. Offered 2.

The identification, culture, and use of annual and herbaceous perennials in gardens and other landscape plantings.

OH. 362.—Turf Management. 2 hours, and 2 hours laboratory. 3 credits. Prerequisites: BTY. 101-102. Offered 1.

The size and scope of the turf industry, characteristics and adaptations of the grasses and other turf plants, basic concepts of planting, establishing, maintaining turf. The care and operation of turf machinery and equipment will be covered. Textbook: Musser, *Turf and Turf Management.*

OH. 402.*—Advanced Plant Propagation. 2 hours, and 2 hours laboratory 3 credits. Prerequisites: OH. 217, prerequisite or corequisite BTY. 211. Offered 2.

A critical study of current literature and research and laboratory research on the physiological and economic factors affecting the commercial propagation of ornamental plants. Textbook: Wells, *Plant Propagation Practices.*

OH. 403.—Ornamental Horticulture Seminar. 1 hour. 1 credit. Offered 1, 2.

Selected reading, reports and discussion of current literature on ornamental horticultural problems and developments.

OH. 420.*—Nursery Operation. 2 hours, and 2 hours laboratory. 3 credits. Prerequisites: OH. 217, 329, corequisite OH. 331. Offered 2.

A study of the principles and practices of wholesale and retail nursery operation, including related regulatory laws, preparation of layout plans and compilation of nursery lists. Two field trips to nurseries and sales yards are required.

OH. 430.—Planting Design.** 1 hour, and 4 hours drafting time. 3 credits. Prerequisites: OH. 329, 331, corequisite OH. 332. Offered 2.

Preparation of planting plans, planting lists, and cost estimates for landscaping small home grounds, school and municipal buildings, and public areas. Textbook: Robinson, *Planting Design.*

OH. 434.—Flower Shop Management.** 2 hours, and 2 hours laboratory. 3 credits. Offered 1. Prerequisite or corequisite: OH. 331.

A study of the principles and practices involved in the operation of retail flower shops with emphasis on organization, equipping and management of the shop, handling, care and use of flowers and other plant materials and basic principles of floral designing. Two field trips are required to a wholesale market and retail flower shops. Textbook: *The Retail Flower Shop.*

OH. 441.*—Commercial Floriculture. 2 hours, and 2 hours laboratory. 3 credits. Prerequisites: BTY. 211, OH. 203, prerequisite or corequisite: OH. 331 and SLS. 301.

The commercial production of greenhouse and field grown cut flowers including culture, harvesting, grading, and marketing. A two-day field trip to production areas is required. Textbook: Post, *Florist Crop Production and Marketing.*

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.
*Offered 1957-58 and in odd years.
**Offered 1958-59 and in even years.

OH. 442.—Commercial Floriculture.** 2 hours, and 2 hours laboratory. 3 credits. Prerequisite: OH. 441. Offered 2.

A continuation of OH. 441 and covering bulb crops, foilage plants, and pot plants commercially important in Florida. A two-day field trip is required.

OH. 462.*—Advanced Turf Management. 2 hours, and 2 hours laboratory. 3 credits. Offered 2. Prerequisites: BTY. 211, OH. 363, SLS. 301.

Production and management of turf for recreational fields, airfields, cemeteries, parks, golf courses, highways, home grounds, institutional grounds, and turf nurseries. Problems of the professional turf maintenance services and the marketing of turf supplies and products will be covered.

OH. 499.—Special Problems in Ornamental Horticulture. 6 hours. 3 credits.

Open to Horticulture seniors on consent of instructor. Individual research work in various phases of horticulture. Exceptional students may repeat this course not more than once.

GRADUATE COURSES

Prerequisites: twenty hours of satisfactory work in Ornamental Horticulture and ten hours of satisfactory work in basic courses in Botany, Chemistry, Soils, Entomology and Plant Pathology.

OH. 603.—Graduate Seminar. 1 hour. 1 credit. Offered 1, 2.

OH. 630.*—Research Methods in Ornamental Horticulture. 2 hours and 3 hours laboratory. 3 credits. Prerequisites: BTY. 211, AY. 452, and permission of instructor. Offered 1, 2.

A critical study of research methods, procedure and literature outlining problems, assembling and analyzing data and presenting results.

OH. 662.—Advanced Turf Technology.** 2 hours, and 3 hours laboratory. 3 credits. Prerequisite: OH. 462. Offered 2.

Principles and problems of turf grass improvements, propagation, nutrition, water management, physiology, soil management, and experimental methods and procedures in turf research.

OH. 670.—Non-thesis Research in Ornamental Horticulture. 2 to 12 hours. 1 to 6 credits. Offered 1, 2, 3.

OH. 699.—Research and Master's Thesis. 0 to 6 credits.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.
*Offered 1957-58 and in odd years.
**Offered 1958-59 and in even years.

PHARMACEUTICAL CHEMISTRY

Instructional Staff 1956-57

Foote, P. A., Gramling, L. G., Lauter, W.M.

PCY. 355.—Organic and Analytical Pharmaceutical Chemistry. 3 hours, and 6 hours laboratory. 5 credits. Prerequisites: CY. 331, 362-363. The first half of the course PCY. 355-356. Offered 1, 2.

The chemistry and pharmacy of natural and synthetic drugs, including qualitative drug analysis and the more important quantitative procedures.

PCY. 356.—Organic and Analytical Pharmaceutical Chemistry. 3 hours, and 6 hours laboratory. 5 credits. The second half of the course PCY. 355-356. Offered 1, 2.

GRADUATE COURSES

PCY. 611.—Synthetic Medicinal Products. 3 hours. 3 credits. Not Offered 1957-58.

Preparation of the more complex synthetic medicinals such as local anesthetics, analgesics, hypnotics, antihistaminics, antimalarials, sulfonamides, organometallic compounds. The relationship between chemical construction and physiological action.

PCY. 612.—Synthetic Medicinal Products. 3 hours. 3 credits. The second half of the course PCY. 611-612. Not offered 1957-58.

PCY. 613.—Synthetic Medicinal Products. 6 hours laboratory. 2 credits. Accompanying laboratory course for PCY. 611. Not offered 1957-58.

Synthesis of organic medicinal compounds.

PCY. 614.—Synthetic Medicinal Products. 6 hours laboratory. 2 credits. Accompanying laboratory course for PCY. 612. Not offered 1957-58.

Synthesis of organic medicinal compounds.

PCY. 621.—Natural Medicinal Products. 3 hours. 3 credits. Not offered 1957-58.

Chemistry of compounds derived from plants and animals.

PCY. 622.—Natural Medicinal Products. 3 hours. 3 credits. The second half of the course PCY. 621-622. Not offered 1957-58.

PCY. 623.—Natural Medicinal Products. 6 hours laboratory. 2 credits. Accompanying laboratory course for PCY. 621. Not offered 1957-58.

Isolation and identification of plant and animal products.

PCY. 624.—Natural Medicinal Products. 6 hours laboratory. 2 credits. Accompanying laboratory course for PCY. 622. Not offered 1957-58.

Isolation and identification of plant and animal products.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PCY. 631.—Analytical and Control Methods. 2 hours, and 9 hours laboratory. 5 credits. Offered 1.

Analytical and control methods with emphasis on the more complicated procedures of the U.S.P., NF., A.O.A.C., and recent literature.

PCY. 632.—Analytical and Control Methods. 2 hours, and 9 hours laboratory. 5 credits. The second half of the course PCY. 631-632. Offered 2.

PCY. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

For students working for the master's degree.

PCY. 799.—Research and Doctoral Dissertations. 1 to 12 credits. Offered 1, 2, 3.

For students who are working for the doctor's degree.

PHARMACOGNOSY

Instructional Staff 1956-57

Voss, Elbert, Head; Johnson, C. H.

PGY. 221.—Practical Pharmacognosy. 2 hours, and 3 hours laboratory. 3 credits. Offered 1, 2.

Sources of crude drugs and systematic classifications of the vegetable and animal drugs of the United States Pharmacopeia and National Formulary.

PGY. 222.—Practical Pharmacognosy. 3 hours. 3 credits. The second half of the course PGY. 221-222. Offered 2, 3.

GRADUATE COURSES

PGY. 601.—Advanced Histology and Microscopy of Vegetable Drugs. 2 hours, and 6 hours laboratory and field work. 4 credits. Offered 1.

Advanced study of microscopic structure and identification of drugs. Preparation of permanent mounts. Detection of adulterations.

PGY. 603.—Microanalytical Pharmacognosy. 6 hours laboratory. 2 credits. Offered 1.

A study of plant constituents employing micro methods.

PGY. 604.—Cultivation and Processing of Medicinal Plants. 1 hour, and 3 hours laboratory. 2 credits. Offered 2.

Commercial sources, culture and preparation of botanical drugs.

PGY. 616.—The Literature of Pharmacognosy. 1 hour. 1 credit. Not offered 1957-58.

Literature and source material of pharmacognosy, assigned readings. A reading knowledge of German is required.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PGY. 621.—Special Problems in Pharmacognosy. 6 hours laboratory or field work. 2 credits. Offered 1.

Identification, classification and qualitative determination of constituents and properties of drug plants; special experiments in the propagation, cultivation, harvesting and curing of native and exotic plants; field work in the collecting of drug plants native to Florida. Either half of the course may be taken for credit without the other half.

PGY. 622.—Special Problems in Pharmacognosy. 6 hours laboratory or field work. 2 credits. The second half of the course PGY. 621-622. Offered 2.

PGY. 625.—Drug Plant Analysis. 2 hours, with or without 6 hours laboratory and field work. 2 to 4 credits. Not offered 1957-58.

Chemical constituents and their identification and determination in drug plants.

PGY. 626.—Drug Plant Analysis. 2 hours, with or without 6 hours laboratory and field work. 2 to 4 credits. The second half of the course PGY. 625-626. Not offered 1957-58.

PGY. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

For students working for the master's degree.

PGY. 799.—Research and Doctoral Dissertations. 1 to 12 credits. Offered 1, 2, 3.

For students who are working for the doctor's degree.

PHARMACOLOGY

Instructional Staff 1956-57

Voss, Elbert, Head; Fox, L. E., Kissel, J. W.

PLY. 301.—Applied Human Anatomy for Pharmacists. 2 hours and 6 hours laboratory. 4 credits. Prerequisite: C-6. Offered 1, 3.

Gross anatomy of the important organ systems and microscopic study of human and mammalian tissues and organs; medical terminology.

PLY. 302.—Applied Human Physiology for Pharmacists. 3 hours, and 3 hours laboratory. 4 credits. Prerequisites: PLY. 301; PS. 201-202, 207-208. Offered 1, 2.

Lectures and laboratory work covering various phases of human physiology.

PLY. 405.—Introductory Pharmacology. 3 hours. 3 credits. The first half of the course PLY. 405-406. Prerequisites: PLY. 301-302; BCY. 301 or BCY. 305-307. Offered 1, 3.

Introductory lectures on methods of drug administration, factors modifying action and dosage of drugs, and principles of general pharmacology and toxicology.

PLY. 406.—Pharmacology. 4 hours, and 3 hours laboratory. 5 credits. The second half of the course PLY. 405-406. Offered 1, 2.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PLY. 552.—Principles of Biologicals. 3 hours. 3 credits. Offered 2.

Physiology and pharmacology of the endocrine glands.

GRADUATE COURSES

PLY. 601.—Neurology. 3 hours, and 6 hours laboratory. 5 credits. A required course for pharmacology majors. Offered 1.

Anatomy and pathological physiology of the nervous system.

PLY. 607.—Advanced Pharmacology. 3 hours. 3 credits. Prerequisite or corequisite: PLY. 601. Offered 1.

Theories of drug action.

PLY. 608.—Advanced Pharmacology. 3 hours. 3 credits. The second half of the course PLY. 607-608. Required for majors. Offered 2.

Theories of drug action.

PLY. 609.—Advanced Pharmacology Laboratory. 3 hours. 1 credit. Offered 1.

Laboratory for PLY. 607.

PLY. 610.—Advanced Pharmacology Laboratory. 3 hours. 1 credit. Offered 2.

Laboratory for PLY. 608.

PLY. 621.—Mammalian Histology. 2 hours, and 6 hours laboratory. 4 credits. Required for majors. Not offered 1957-58.

The microscopic study of the tissues and organs of mammals.

PLY. 622.—Pathology. 3 hours, and 6 hours laboratory. 5 credits. Prerequisites: 8 hours of physiology and neurology and PLY. 621. Required of Ph.D. majors. Not offered 1957-58.

Histologic and physiologic changes coincidental with disease.

PLY. 630.—Special Problems. 3 hours and 6 hours laboratory. 5 credits Prerequisites: PLY. 607-608. Offered 1.

Content of course will vary from year to year. For the most part, problems of a toxicological nature will be selected.

PLY. 650.—Advanced Pharmacological Testing. 2 hours, and 6 hours laboratory. 4 credits. Prerequisites: PLY. 607-608, one semester of statistics. Offered 2.

Theories and techniques utilized in pharmacological research and testing.

PLY. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

For students working for the master's degree.

PLY. 799.—Research and Doctoral Dissertations. 1 to 12 credits. Offered 1, 2, 3.

For students working for the doctor's degree.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PHARMACY

Instructional Staff 1956-57

Husa, W. J., Head; Becker, C. H., Beltz, L. D., Foote, P. A., Gramling, L. G., Kern, J. H., Winters, E. P.

PHY. 106.—Pharmaceutical Calculations. 2 hours. 2 credits. Prerequisite: C-42. Offered 1, 2, 3.

Calculations used in pharmaceutical work with emphasis on practical problems.

PHY. 223.—Galenical Pharmacy. 2 hours, and 3 hours laboratory. 3 credits. Prerequisites or corequisites: CY. 121-122, PHY. 106, PGY. 221. Offered 1, 2.

Galenical preparations such as syrups, spirits, tinctures, extracts and emulsions. The preparation of these materials extemporaneously on a small scale.

PHY. 224.—Galenical Pharmacy. 2 hours, and 3 hours laboratory. 3 credits. Corequisite or prerequisite: PGY. 222. The second half of the course PHY. 223-224. Offered 2, 3.

PHY. 311.—Inorganic Pharmacy. 3 hours, and 3 hours laboratory. 4 credits. Prerequisites: CY. 121-122, PHY. 223-224. Offered 1, 2.

The inorganic compounds used in medicine; their Latin titles, origin, and physical, chemical and physiological properties; their preparation and use in compounding.

PHY. 315.—History and Ethics of Pharmacy. 2 hours. 2 credits. Prerequisites: A minimum of 12 credits in courses in College of Pharmacy. Offered 1.

Lectures and assigned reading in the progress of pharmacy and medicine from the ancient civilizations to the present time together with a consideration of the duties of a pharmacist to the public, to other pharmacists, and to the other health professions.

PHY. 374.—Commercial Pharmacy. 5 hours. 5 credits. Prerequisite: ATG. 211. Prerequisite or corequisite: PHY. 311. Offered 1, 2.

Merchandising and management problems of the retail pharmacist, including buying, pricing and promotion of drugstore products and services and business and legal problems encountered in the management of a retail pharmacy.

PHY. 441.—Manufacturing Pharmacy. 4 hours laboratory. 2 credits. Prerequisites: PHY. 311 and PCY. 355 or 356. A limited number of students, with approval of instructor, will be permitted to take this course. Offered 1, 2.

Manufacture of pharmaceutical preparations such as syrups, elixirs, tablets, and emulsions on pilot plant and hospital scale.

PHY. 455.—Pharmaceutical Specialties. 2 hours, and 2 hours laboratory. 3 credits. Prerequisites: PCY. 355 or PCY. 356. The first half of the course PHY. 455-456. Offered 1, 2.

A study of the more important non-official specialties found in modern prescription practice and over-the-counter sales. More than twelve hundred specialties are available for study.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PHY. 456.—Pharmaceutical Specialties. 2 hours, and 2 hours laboratory. 3 credits. The second half of the course PHY. 455-456. Offered 2, 3.

PHY. 461.—Prescriptions and Dispensing. 2 hours, and 4 hours laboratory. 4 credits. Prerequisites: PHY. 311, PCY. 355. Corequisite: PCY. 356. Offered 1, 2.

Methods of compounding and dispensing various types of prescriptions, methods of detecting and overcoming incompatibilities, accepted methods of checking, pricing and filling prescriptions, professional pharmacy, hospital pharmacy and dental pharmacy.

PHY. 462.—Prescriptions and Dispensing. 2 hours, and 4 hours laboratory. 4 credits. The second half of the course PHY. 461-462. Offered 2, 3.

PHY. 481.—Pharmacy Laws. 2 hours. 2 credits. Prerequisite: PHY. 311. Offered 1, 2.

Various Federal, state and local statutes, regulations, administrative rulings and ordinances regulating the practice of pharmacy.

PHY. 501.—Hospital Pharmacy Operations. 3 hours. 3 credits. Prerequisites: PHY. 311 and PCY. 355 or 356. Offered 1, 2.

An introduction to the problems, services, and administration of a hospital pharmacy and the chief pharmacist's role and relationship to the hospital medical staff.

GRADUATE COURSES

Prerequisite: Graduation form an accredited college of pharmacy with the degree of B.S. in Pharmacy or its equivalent.

PHY. 602.—Selected Topics in Pharmacy. 2 hours. 2 credits. Not offered 1957-58.

Selected problems of current interest.

PHY. 603.—Advanced Pharmacy. 2 hours. 2 credits. Offered 1.

Important pharmaceutical preparations, particularly those involving chemical changes.

PHY. 604.—Advanced Galenical Pharmacy. 2 hours. 2 credits. Not offered 1957-58.

Fundamental research work on which formulas for various galenicals are based.

PHY. 643.—Pharmaceutical Equipment and Machinery. 2 hours, and 4 hours laboratory. 4 credits. Offered 1.

Industrial pharmaceutical machinery and equipment such as colloid mills and homogenizers, sifters, pulverizers, centrifuges, tablet machines and ampul washers, fillers and sealers. The manufacture of pharmaceuticals on a pilot plant scale in the laboratory.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PHY. 645.—Pharmaceutical Formulations. 2 hours and 4 hours laboratory. 4 credits. Offered 2.

Source, cost, and application of raw materials. Study of formulation and procedures used in large scale manufacture. Selected formulas are prepared on a laboratory and pilot plant scale.

PHY. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

For students working for the master's degree.

PHY. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2, 3.

For students who are working for the doctor's degree.

PHILOSOPHY

Instructional Staff 1956-57

Bartlett, G. R., Head; Elliott, H., Groth, J. H., MacDonald, L. D., Oliver, J. W., Pait, J. A.

Majors. Students intending to major in philosophy in the College of Arts and Sciences should, at the earliest possible opportunity, consult the departmental advisor.

Prerequisites. It is desirable that students have credit for PPY. 220 before taking courses numbered 300 or above. PPY. 201 may also serve as an introduction to more advanced courses.

PPY. 201.—Problems of Philosophy. 3 hours. 3 credits. Offered 1, 2.

A consideration of some of the major problems of philosophy—ethics, philosophy of science, theory of knowledge, philosophy of art, philosophy of religion and metaphysics. Selections from the writings of important philosophers, ancient and modern, with emphasis upon the modern, will be read.

PPY. 220.—Foundations of Philosophy. 3 hours. 3 credits. Offered 1.

The fundamental techniques of analysis and evaluation used in the further study of philosophy and other subjects, and application of these techniques to philosophical material.

PPY. 231.—Current Philosophic Issues. 2 hours. 2 credits. Offered 1, 2.

The significance of selected philosophic issues related to the fields of politics, theology, literature and science.

PPY. 236.—Philosophy of Religion. 3 hours. 3 credits. Offered 1.

An examination of the principal views of major philosophers on questions pertaining to God, freedom and determinism, good and evil, science and religion, church and state, etc.

PPY. 311.—History of Philosophy—Ancient and Medieval Periods. 3 hours. 3 credits. Offered 1.

History of philosophy from Greece to the Renaissance. Selections from the writings of the principal figures of this period will be read.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PPY. 312.—History of Philosophy — The Renaissance through the Eighteenth Century. 3 hours. 3 credits. Offered 2.

History of philosophy from the Renaissance to the end of the 18th century. Selections from such writers as Descartes, Spinoza, Locke, Hume, and Kant will be read.

PPY. 313.—History of Philosophy—Nineteenth and Twentieth Centuries. 3 hours. 3 credits.

History of philosophy from the beginning of the 19th Century to the present time. Selections from such writers as Hegel, Mill, Bergson, and Russell will be read.

PPY. 320.—Deductive Logic. 3 hours. 3 credits. Offered 1.

An introduction to deductive logic. Some discussion of Aristotelian logic, but the emphasis is on the more general and more powerful symbolic techniques developed in the contemporary period.

PPY. 321.—Ethics. 3 hours. 3 credits. Offered 1.

An inquiry into basic concepts and principles of morals. Readings will include selections from the works of important ethicists.

PPY. 322.—Theory of Knowledge. 3 hours. 3 credits. Offered 1.

An inquiry into the nature of human knowledge, its grounds and structure, and the criteria of acceptable beliefs. Readings will include selections from the important historical and modern philosophers with emphasis on contemporary empiricism.

PPY. 323.—Philosophy of Science. 3 hours. 3 credits. Offered 2.

A consideration of the nature of the sciences, the relations among them, the nature of scientific methods and philosophic issues involved in the basic concepts of the sciences.

PPY. 324.—Aesthetics. 3 hours. 3 credits. Offered 2.

A systematic investigation of the problems of aesthetic value. Consideration will be given to the work of prominent philosophic aestheticians.

PPY. 430.—Individual Work. 3 hours. 3 credits. Prerequisites. 12 hours of philosophy, and permission of the departmental advisor. Offered 1, 2.

Provision will be made for advanced undergraduate students who desire to supplement the regular courses by individual reading or investigation under guidance. Students will be helped to plan a definite program, and will meet a member or members of the departmental staff in frequent conferences. With change of content, PPY. 430 may be elected for full credit in subsequent sessions.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

PPY. 511.—Philosophy in America. 3 hours. 3 credits. Prerequisite: At least one course in philosophy.

Principal movements in philosophic thought in this country; Puritanism, the Enlightenment, Transcendentalism, the academic tradition, the influence of science and evolution, idealism, pragmatism, realism, naturalism, recent trends.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PPY. 520.—Semantics. 3 hours. 3 credits. Prerequisite: PPY. 220. Offered 2.

The recognition of major positions in the field and the selection and application of a theory of signs to chosen material from the humanities, and the physical, biological, and social sciences.

PPY. 525.—Social and Political Philosophy. 3 hours. 3 credits. Prerequisite: PPY. 321.

Analytic inquiry into outstanding social and political philosophies of the past and present.

PPY. 526.—Metaphysics. 3 hours. 3 credits. Prerequisite: PPY. 220 or PPY. 322.

A consideration of the principal problems of metaphysics—the nature of reality, the problem of universals, space, time, causality, mechanism and organicism, etc.

PPY. 591.—The Appraisal of Human Achievement. 3 hours. 3 credits. Prerequisite: Consent of departmental advisor.

A senior seminar designed for the critical student. Professors from the humanities, social, biological and physical sciences will join with the students in making an analytical evaluation of contemporary human development. Intended for students with exceptionally good records in any major field. Assigned outside reading and papers.

PPY. 592.—The Appraisal of Human Achievement. 3 hours. 3 credits. The second half of the course PPY. 591. Prerequisite: Consent of departmental advisor.

GRADUATE COURSES

Students planning work in philosophy leading to the master's degree are advised to consult the head of the department at their earliest opportunity.

Prerequisites: Only students with an adequate undergraduate preparation in philosophy will be admitted to graduate courses. The consent of the departmental advisor is required before students will be enrolled in any graduate course.

Offerings: Certain of the courses listed are offered at regular intervals while others are offered as required. For the complete listing of graduate courses for a given semester, the student should consult the Schedule of Courses for that semester.

PPY. 601.—Seminar in History of Philosophy. 3 hours. 3 credits. Offered 1.

The material selected for study may vary in accordance with the needs and interests of the students.

PPY. 602.—Seminar in Problems of Value. 3 hours. 3 credits. Offered 2.

The material selected for study may vary in accordance with the needs and interests of the students.

PPY. 603.—Seminar in Contemporary Philosophy. 3 hours. 3 credits.

The material selected for study may vary in accordance with the needs and interests of the students.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PPY. 604.—Seminar in Problems of Knowledge. 3 hours. 3 credits.

The material selected for study may vary in accordance with the needs and interests of the students.

PPY. 610.—(Identical with MS. 610).—Mathematical Logic. 3 hours. 3 credits. Prerequisite: PPY. 320.

A detailed study of a single rigorous deductive system which provides a logical foundation for mathematics and an analysis of some of the basic concepts occurring in most language systems.

PPY. 630.—Individual Work. 3 hours. 3 credits. Offered 1, 2.

Provision will be made for students who desire to supplement the regular courses by individual reading or investigation under guidance. Students will be helped to plan a definite program, and will meet a member or members of the departmental staff in frequent conferences. With change of content, PPY. 630 may be elected for full credit in subsequent sessions.

PPY. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2.

PPY. 700.—Philosophy of Education. 3 hours. 1 credit.

Various philosophies of education presented in their broad philosophic contexts and through an analysis of the original sources. Designed for doctoral candidates who plan to do university teaching.

PHYSICAL EDUCATION, HEALTH AND ATHLETICS

Instructional Staff 1956-57

Salt, E. B., Head; Beard, P. M., Benz, W. P., Boyd, C. A., Cherry, H. S., Crickenberger, M. E., Crowson, B. M., Damron, C. F., Edmondson, C., Goodrich, M., Harlan, W. E., Hicks, D. A., Leavitt, N. M., Lee, P. A., Leilich, R. E., McCachren, J. R., Millar, J. C., Nagle, F. J., Potter, W. M., Pye, R. L., Rehling, C. H., Ryan, J. E., Sandefur, W. T., Schnell, H. W., Scott, T. M., Stephens, F. W., Stevens, B. K., Titus, M. E., Vadheim, R. H.

These courses are designed primarily for students planning to teach in the areas of Physical Education, Health Education, or Recreation. Students planning to teach in other areas may register for such courses as are necessary to meet general preparation or elementary school certification requirements. Students not planning to teach may register for any of the courses in this section only upon special permission of the Head of the Department of The Professional Curriculum.

Professional courses in the areas of Physical Education, Athletic Coaching, Health Education and Recreation are designed to prepare students (1) to become instructors of physical education in schools and colleges; (2) to direct and coach athletic teams in the major and minor sports; (3) to assume positions of leadership in organizing and conducting recreation programs for summer camps, county and municipal recreation departments and various youth organizations; (4) to serve as teachers, coordinators and directors of health education in schools, in state, county and municipal health departments, and in voluntary health agencies.

PHA. 251.—Folk, Social and Tap Dance. 1 hour, and 4 hours laboratory. 2 credits. Offered 1.

Basic skills in folk, square, social and tap dancing.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PHA. 252.—Modern Dance. 3 hours laboratory. 1 credit. Offered 2.

Fundamentals of movement and its rhythmic structure.

PHA. 253.—Team Sports for Women. 1 hour, and 4 hours laboratory. 2 credits. Offered 1.

(Formerly PHA. 272). Skills, strategy and application of rules for field hockey, softball, track and field.

PHA. 254.—Team Sports for Women. 1 hour, and 4 hours laboratory. 2 credits. Offered 1.

Skills, strategy and application of rules for volleyball, soccer, speedball, and basketball.

PHA. 255.—Individual and Dual Sports for Women. 1 hour, and 4 hours laboratory. 2 credits. Offered 2.

(Formerly PHA. 275). Skills, strategy and application of rules for archery, badminton, bowling, bait casting, and other recreational activities.

PHA. 256.—Swimming and Diving for Women. 3 hours laboratory. 1 credit. Offered 1.

(Formerly PHA. 273). Basic skills and teaching methods for swimming and diving.

PHA. 257.—Gymnastics for Women. 3 hours laboratory. 1 credit. Offered 2.

(Formerly PHA. 273). Stunts, tumbling, pyramid building; apparatus; body mechanics; group games.

PHA. 258.—Tennis and Golf for Women. 1 hour, and 4 hours laboratory. 2 credits. Offered 2.

(Formerly PHA. 301, 302). Theory and practice in tennis and golf with respect to skills, strategy, application of rules, teaching methods and the conduct of matches and tournaments.

PHA. 261.—Personal Hygiene. 3 hours. 3 credits. Offered 1, 2.

Major factors for protecting and improving the health of the individual through the development of desirable knowledges, attitudes, and practices. Contemporary health problems included are: nutrition, mental hygiene, hygiene aspects of family living, and prevention of disease and infection.

PHA. 262.—Community Hygiene. 3 hours. 3 credits. Offered 1.

Problems of healthful group living, including: sources of infection, housing, food sanitation and control, water supply, industrial and occupational health, maternal and child hygiene, medico-economics, and community organization for protecting, maintaining, and improving the health of the societal group.

PHA. 281.—Football. 1 hour, and 4 hours laboratory. 2 credits. (Formerly PHA. 131). Offered 1.

Skills, rules, coaching methods, offensive and defensive team play in football.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PHA. 282.—Basketball. 1 hour, and 4 hours laboratory. 2 credits. (Formerly PHA. 231). Offered 2.

Skills, rules, coaching methods, offensive and defensive team play in basketball.

PHA. 283.—Track and Baseball. 1 hour, and 4 hours laboratory. 2 credits. (Formerly PHA. 132 and 232). Offered 2.

Skills, rules and coaching methods in track and baseball.

PHA. 284.—Team Games for Men. 1 hour, and 4 hours laboratory. 2 credits. (Formerly PHA. 245). Offered 1.

Skills, rules, strategies and teaching methods in volleyball, touch football, softball, basketball, soccer, speedball and gator ball.

PHA. 285.—Individual and Dual Sports for Men. 1 hour, and 4 hours laboratory. 2 credits. Offered 1.

Skills, rules, strategies and teaching methods in tennis, handball, golf, and other individual and dual activities.

PHA. 286.—Aquatics for Men. 1 hour, and 4 hours laboratory. 2 credits. (Formerly PHA. 144 and 244). Offered 2.

Skills, knowledges and teaching methods in swimming and diving.

PHA. 287.—Gymnastics for Men. 1 hour, and 4 hours laboratory. 2 credits. (Formerly PHA. 142 and 143). Offered 2.

Skills, knowledges and teaching methods in gymnastics, tumbling, combatives, and developmental activities.

PHA. 291.—Principles of Physical Education. 3 hours. 3 credits. Offered 1, 2.

Principles underlying contemporary theory and practice in physical education.

PHA. 295.—Introduction to Physical Therapy. 2 hours. 2 credits.

Basic understandings with respect to Physical Therapy as a profession; the historical background; the various modalities used in treatment such as heat, cold, light, electricity, water, mechanotherapy; professional education and personal qualifications; the various areas of treatment with respect to general medicine and surgery, orthopedics, neurology and psychiatry; professional relations and ethics.

PHA. 303.—Life Saving and Advanced Swimming. 3 hours laboratory. 1 credit. Prerequisite: PHA. 256 or permission of the instructor.

Skills and teaching methods in life saving and water safety; advanced skill techniques in swimming and diving; conduct of swimming meets.

PHA. 304.—Synchronized Swimming. 3 hours laboratory. 1 credit. Prerequisite: PHA. 256 or permission of the instructor.

Individual, dual and group techniques in synchronized swimming; composition and production.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PHA. 305.—Teaching and Officiating Team Sports for Women. 6 hours laboratory. 2 credits. Prerequisites: PHA. 253, PHA. 254. Offered 1.

Methods of teaching and officiating volleyball, basketball, and field hockey.

PHA. 306.—Teaching and Officiating Team Sports for Women. 6 hours laboratory. 2 credits. Prerequisites: PHA. 253, PHA. 254. Offered 2.

Methods of teaching and officiating softball, soccer, and speedball.

PHA. 307.—Teaching of Folk, Social and Tap Dance. 6 hours laboratory. 2 credits. Prerequisite: PHA. 251. Offered 1.

(Formerly PHA. 278). Theory and practice in teaching folk, square, social and tap dance.

PHA. 308.—Teaching of Modern Dance. 6 hours laboratory. 2 credits. Prerequisite: PHA. 252. Offered 2.

(Formerly PHA. 277). Theory and practice in teaching modern dance; approaches to composition; dance accompaniment.

PHA. 309.—Dance Composition. 3 hours laboratory. 1 credit. Prerequisite: PHA. 380.

Modern dance composition with respect to form, design, dynamics, and rhythm.

PHA. 310.—Dance Composition. 3 hours laboratory. 1 credit. Prerequisite: PHA. 308.

Individual and group composition in modern dance for production, including staging and costuming.

PHA. 315.—Applied Anatomy and Physiology. 3 hours. 3 credits. Prerequisite: C-6. Offered 1, 2.

Basic understandings with respect to the structure and function of the skeletal, muscular, nervous, respiratory, digestive, reproductive, endocrine, excretory and circulatory systems; and their application to the fields of physical education and health education.

PHA. 321.—Theory of Play. 2 hours. 2 credits.

An understanding of the significance of and constructive value of play. Emphasis is placed on the historical background and development of the present play or recreation movement, the theoretical explanation of the play, the importance and place of play in modern life, and a survey of current developments in the field of recreation.

PHA. 322.—Camp Programs and Counselor Training. 2 hours, and 3 hours laboratory. 3 credits. Offered 1.

The training of counselors for organized camping. The growth and significance of the camping movement, the understanding of camp techniques, counselor qualifications, guidance of the camper. The total camping program including camp craft, nature and woods lore, and informal activities useful for rainy day and special occasion programs. Special attention is given to school camping programs.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PHA. 323.—Camp Administration. 2 hours. 2 credits. Prerequisite: PHA. 322, or permission of the instructor.

Responsibilities and duties involved in the administration of camps. Current camping developments with attention given to school programs, camp site selection and development, equipment and facilities, maintenance, finances, health, safety and protection, sanitation, personnel, program, professional and public relations.

PHA. 324.—Social Recreation. 3 hours, and 1 hour to arrange. 3 credits. Offered 1, 2, 3.

Methods, materials and techniques of conducting social recreation programs. Planning and participating in social activities for groups of varying sizes and for different situations. The activities include progressive parties, quiet and semi-active group games, stunts and contests, social mixers, outing events including hikes and picnics, and activities for special occasions, such as Thanksgiving, Halloween and Christmas.

PHA. 325.—Conduct of Playgrounds and Indoor Centers. 3 hours. 3 credits. Offered 1, 2.

For community recreation workers, school personnel and volunteers interested in the operation of playground and indoor center programs. Physical facilities, layout and equipment, personnel, activities, program planning and problems of operation and administration.

PHA. 333.—Coaching of Tennis and Golf. 1 hour, and 4 hours laboratory. 2 credits. Prerequisite: PHA. 285.

Coaching techniques as they apply to tennis and golf.

PHA. 334.—Coaching of Gymnastics and Swimming. 1 hour, and 4 hours laboratory. 2 credits. Prerequisite: PHA. 286-287.

Coaching techniques as they apply to gymnastics and swimming.

PHA. 351.—Intramural Athletics and Officiating. 2 hours, and 1 hour to arrange. 2 credits.

Organization and administration of the intramural program at the secondary school and college levels with respect to units of competition, program of sports, organizing participation, scoring plans, awards, rules and regulations. Techniques of officiating and training of officials will be included.

PHA. 361.—Elementary School Health Program. 3 hours. 3 credits. Offered 1, 2, 3.

Principles of developing the health program with procedures for protecting and improving the health of the elementary school child through: home-school-community resources and cooperation; health screening and follow-up; use of school plant health services; selection and use of health instructional materials, records and reports in providing health experiences at various levels of the elementary school; integration and evaluation of health instruction.

PHA. 362.—Secondary School Health Programs. 3 hours. 3 credits. Offered 2.

Curriculum in health instruction: the relationships of school health with official and voluntary health agencies and other community groups; operation of the school health council; policies in administering health instruction; resource materials; coordination of all school health activities. Consideration will be given to the State recommended course for "Effective Living."

The statement "Offered 1" means offered first semester; 2, second semester; 3. summer session.

PHA. 363.—Teaching Physical Education in the Secondary School. 3 hours. 3 credits. Prerequisite: Satisfactory completion of all required PHA. activity courses. Offered 1, 2.

Methods and participation. Special methods with reference to materials, content and techniques in the teaching of physical education on the secondary school level as they relate to team games, rhythms, gymnastic activities, individual and dual sports. Opportunity is provided for participation in secondary school physical education programs.

PHA. 369.—School Safety Education. 2 hours. 2 credits. Offered 1.

General safety content as applied in elementary and secondary school programs. Methods and materials for teaching safety, and the organization of safety education programs.

PHA. 373.—Teaching Physical Education in the Elementary School. 2 hours, and 2 hours laboratory. 3 credits. Offered 1, 2, 3.

The program of physical education activities for the elementary school including small group play, large group play, directed play, rhythmic activities and team games, together with methods and procedures for conducting such a program.

PHA. 374.—Rhythmic Activities in the Elementary School. 3 hours laboratory. 1 credit.

Theory and practice of rhythmic activities for children in kindergarten and grades one through six.

PHA. 375.—Adapted Physical Education. 2 hours, and 1 hour to arrange. 2 credits. Offered 1, 2.

Instruction in methods of meeting the physical needs of children with certain physical defects. The problems involved in providing adapted sports programs for those limited physical capacities.

PHA. 376.—First Aid and Injuries. 1 hour, and 2 hours laboratory. 2 credits (Formerly PHA. 264). Prerequisite: Limited to Upper Division students. Offered 1, 2, 3.

Standards and accepted principles of first aid. Dressings and bandages, wounds and their care, artificial respiration, poisons, fractures and dislocations, burns, transportation of the injured, and other common emergencies.

PHA. 421.—Driver Education and Traffic Safety. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite: Limited to Upper Division students who hold a valid driver's license. Offered 1, 2.

Prepares teachers to conduct driver education and training courses on the secondary school level. Methods and materials concerned with the psycho-physical limitations of drivers, driving practices, automobile construction, manipulation and maintenance, pedestrian protection, road training, and skill tests.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PHA. 422.—Community Health Education Program. 3 hours. 3 credits.

Planning, conducting, and evaluating community health education programs. Organization of federal, state, county and city health agencies; voluntary agencies offering health services; community facilities and resources for public health; community health surveys.

PHA. 441.—Administration of Physical Education and Athletics. 3 hours. 3 credits. Prerequisite or corequisite: PHA. 363. Offered 1, 2.

Policies, standards, and procedures as they pertain to the administration of physical education and athletic programs, including finance, legal aspects, office management, publicity, facilities and equipment, athletic associations and conferences, health and safety, awards, athletic contest management.

PHA. 446.—Administration of Community Recreation. 3 hours. 3 credits. Prerequisite: Limited to Upper Division students.

Problems involved in organizing and administering community recreation including school-community programs: legal aspects, organization of a department and its program, budgeting and financing, records and reports, public relations, facilities and equipment, selection and supervision of staff.

PHA. 449.—The Operation of Recreation Programs. 15 credits. Prerequisite: Permission of the instructor. Offered 1, 2.

Practical field experience. Provides for integration of principles, program planning and professional relationships through seminars and participation in selected off-campus recreation programs under the supervision of this College and Recreation Department staffs. No other course may be scheduled during the semester.

PHA. 491.—The Operation of Community Health Education Programs. 1 hour, and 6 hours laboratory. 3 credits. Prerequisite: Permission of the instructor.

For advanced students in health education. Problems in operating community programs of health education. Field experiences in health conducted through both official and voluntary health agencies.

PHA. 492.—The Operation of Community Health Education Programs. 1 hour, and 6 hours laboratory. 3 credits. Prerequisite: Permission of the instructor. The second half of the course PHA. 491-492.

PHA. 510.—Evaluative Procedures in Physical Education and Health Education. 3 hours. 3 credits.

Graduate major credit. Basic concepts of measurement and evaluation as applied to the fields of physical education and health education. Status of evaluative procedures; problems of administering testing programs in the schools. Analysis of instruments and techniques used in measuring ability, capacity, and progress.

PHA. 512.—Physiological Bases of Physical Education. 3 hours. 3 credits. Offered 2.

Graduate major credit. The application of fundamental concepts of human physiology to the programs of physical education and sports. Emphasis is placed upon both acute and chronic physiologic effects and adjustments attending participation in physical activity. Consideration is given to major factors in diet, training and conditioning, physical fitness, fatigue, all-out performance, and physiological characteristics of champion athletes. Status and recent developments in research in sports physiology is stressed throughout.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PHA. 560.—Administration of School Health Programs. 3 hours. 3 credits.

Graduate major credit. Fundamental policies and procedures in organizing, administering and coordinating a comprehensive school health program. Includes school responsibilities in health, with respect to: environment; planned educational experiences: appraisal, counseling, and other services; modified programs for exceptional children; emergency health conditions; in-service health education of teachers and health personnel. For school and community health workers, school administrators, supervisors and teachers.

GRADUATE COURSES

PHA. 601.—Interpretations of Physical Education. 3 hours. 3 credits. Offered 1, 3.

The broad philosophical bases upon which the modern program of physical education is predicated. Biological, psychological, sociological and educational implications in interpreting and delineating the function of physical education in contemporary democratic society.

PHA. 605.—Research Methods in Physical Education, Health Education and Recreation. 3 hours. 3 credits. Offered 1, 3.

Elements and techniques of research and their application to problems in the fields of physical education, health education and recreation. The identification of the various research methods, familiarization with outstanding and significant research reports, evaluation of published research.

PHA. 615.—Supervision of Physical Education. 3 hours. 3 credits. Offered 1, 3.

For those now employed or planning to become supervisors of state, county or city programs of physical education. Observational techniques, the evaluation and improvement of programs and teaching, standards of judging instruction, types of conferences, principles of curriculum construction, and administrative relationships.

PHA. 618.—The College Physical Education Program. 3 hours. 3 credits.

A study of the philosophy, program content, administration and methods of conducting the required, intramural and professional preparation programs of physical education in colleges and universities.

PHA. 620.—Problems in the Administration of Athletics. 3 hours. 3 credits. Offered 2, 3.

Problems of administering the interscholastic athletic program. The place of athletics in education; various methods of organizing the programs; establishment of policies relating to staff, budget, equipment, facilities, programs, awards, public relations, membership in conferences, and legal liability. The intramural athletic program.

PHA. 633.—Problems in Physical Education. 3 hours. 3 credits. Prerequisite: PHA. 605. Offered 2, 3.

Contemporary problems in physical education designed to broaden the student's understanding of principles and current practices as they relate to programs in this field.

PHA. 645.—Physical Education Workshop Series. 6 hours. 6 credits.

Intensive cooperative study of special problems in physical education by administrators, physical education teachers and others. Membership is limited to selected groups.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

REQUIRED PHYSICAL EDUCATION FOR MEN

Instructional Staff 1956-57

Schnell, H. W., Head; Amor, M.; Benz, W. P.; Bitondo, T.; Crickenberger, M. E.; Dornbush, L. W., Capt.; Eckdahl, J. P.; Harlan, W. E.; Hullihan, W. F.; Lee, P. A.; Leilich, R. E., McCachren, J. R.; Millar, J. C.; Mooney, E. G.; Moore, A. C.; Nagle, F. J.; Philpott, F. E.; Potter, W. M.; Rehling, C. H.; Reisinger, R. H.; Ryan, J. E.; Scott, T. M.; Stephens, F. W.; Titus, M. E.; Waglow, I. F.; Welsch, W. R.

The Required Physical Education Program for Men consists of the Basic Program, the Advanced Sports Program, and the Elective Sports Program. The University requires each student, including transfers, to register for this program until he receives his degree or has been in attendance eight semesters.

In the Basic Program instruction is given in Boxing, Gymnastics and Tumbling, Track and Field Activities, Rugged Games and Healthful Living. The instruction in the Basic Program is directed toward the development of the student's physical fitness, fundamental sports skills, and an understanding of personal and social problems relating to the health of the student. The program also serves to introduce the student to the activities of the intramural and recreational sports program.

The Advanced Sports Program is designed to offer the student an opportunity to learn skills so he can engage with satisfaction and enjoyment in three of the following sports, two of which must be from Golf, Handball, Swimming, and Tennis: Advanced Golf, Advanced Handball, Advanced Tennis, Archery, Badminton, Bait Casting, Basketball, Bowling, Equitation, Golf, Gymnastics, Handball, Lacrosse, Rifle Marksmanship, Senior Lifesaving, Soccer, Social Dancing, Square Dancing, Swimming, Tag Football and Softball, Tennis, Tumbling, Volleyball, and Water Safety Instructor's Course. Instruction and participation are offered in the skills of the sports, and proficiency tests, plus instructor's ratings, are used to measure the student's accomplishments. The sport to be participated in is selected at the first meeting of the class.

The Elective Sports Program is designed to give the student an opportunity for participation in a sport of his own choosing. While assigned to this program, the student must participate in one additional sport from among those not utilized in meeting the requirements of the Advanced Sports Program. Participants in freshman or varsity sports may substitute that activity for the requirement of the Basic Program or the Elective Sports Program.

The passing of a Physical Fitness Test is required at the end of each semester while attending class. A student who fails the test obtains further assignment in the program through a personal conference with a faculty member in the departmental office.

Attendance at class is required until the student completes the prescribed requirements of the several programs. At the time of his graduation a student must have participated satisfactorily in the Basic Program, the Advanced Sports Program, and the Elective Sports Program as prescribed by the department.

Students assigned to the Adapted Program by the Department of Student Health because of physical limitations or deviations shall engage in a program recommended by that department. This program is administered by the Adapted Section of the Department of Required Physical Education for Men.

PL. 101.—First Semester Physical Fitness and Sports for Men. 4 hours. Offered each semester.

The basic program.

PL. 102.—Second Semester Physical Fitness and Sports for Men. 4 hours. Offered each semester.

PL. 103.—Third Semester Physical Fitness and Sports for Men. 4 hours. Offered each semester.

PL. 104.—Fourth Semester Physical Fitness and Sports for Men. 4 hours. Offered each semester.

PL. 105.—Fifth Semester Physical Fitness and Sports for Men. 4 hours. Offered each semester.

PL. 106.—Sixth Semester Physical Fitness and Sports for Men. 4 hours. Offered each semester.

PL. 107.—Seventh Semester Physical Fitness and Sports for Men. 4 hours. Offered each semester.

PL. 108.—Eighth Semester Physical Fitness and Sports for Men. 4 hours. Offered each semester.

REQUIRED PHYSICAL EDUCATION FOR WOMEN

Instructional Staff 1956-57

Leavitt, N. M., Head; Bitondo, T., Crickenberger, M. E., Crowson, B., Edmondson, C., Lee, P. A., Millar, J. C., Philpott, F. E., Pye, R. L., Rehling, C. H., Schnell, H. W., Titus, M. E., Waglow, I. F., Welsch, W. R.

The program for women consists of the following:

All students are required to pass a swimming test or complete a course in swimming. Students excused by the University physician are exempted from this requirement. All women students are required to register for and participate satisfactorily in four semesters of physical education.

A varied program of activities is offered so that a student with an A Medical Rating may enjoy a balanced program in physical education. A student wishing to take an advanced course must have completed the beginner's course or must secure departmental approval.

Students with a B Medical Rating are required to participate in some Adapted Physical Education Activities which shall be recommended by the University physician and administered by a member of the Women's Physical Education staff. Courses which are considered suitable for the B Medical Rating include Swimming, Archery, Bait Casting, Recreational Sports, Social Dance, Square Dance, Golf, Body Mechanics, and Equitation.

Students should not purchase a physical education costume before receiving instructions from the department.

PL. 151.—First Semester Physical Education for Women. 4 hours. Offered each semester.

PL. 152.—Second Semester Physical Education for Women. 4 hours. Offered each semester.

PL. 153.—Third Semester Physical Education for Women. 4 hours. Offered each semester.

PL. 154.—Fourth Semester Physical Education for Women. 4 hours. Offered each semester.

PHYSICS

Instructional Staff 1956-57

Williamson, R. C., Head; Barrow, C. H.; Flowers, J. W.; Gordon, M. M.; Jaggi, M. P.; Knowles, H. L.; Lafferty, D. L.; Meyer, A.; Omer, G. C., Jr.; Phillips, A. R.; Rhoads, W. P.; Sawyer, E. M.; Smith, A. G.; Swanson, D. C.; Teller, M. H.

Students planning an undergraduate major in physics in the College of Arts and Sciences are advised to select the following courses: in the freshman year, MS. 105-106 and CY. 217-218; in the sophomore year, PS. 205-206-207-208-209-210, MS. 353-354, and GN. 133-134; in the upper division, PS. 307, 309, 310, 311, 320, 402, 502, 505, MS. 521, and GN. 201-202; MS. 522 and FH. 133-134 are also recommended.

PS. 110.—Agricultural Physics. 3 hours. 3 credits. Prerequisite: C-42. Open only to University College Students preparing for agriculture or to students in the College of Agriculture. Offered 1.

The subject matter is confined to the material having direct applications in the field of agriculture. An attempt is made to give the student a working knowledge of the fundamental physical principles which he will encounter in his work in soils, agricultural engineering, plant physiology, or dairying.

PS. 201.—General Physics. 4 hours. 3 credits. The first half of the course PS. 201-202. Prerequisite: C-42. Corequisite: PS. 207. May be taken for credit without PS. 202. Offered 1, 2, 3.

General physics for science students.

PS. 202.—General Physics. 4 hours. 3 credits. The second half of the course PS. 201-202. Corequisite: PS. 208. Offered 1, 2, 3.

PS. 205.—General Physics. 4 hours. 3 credits. The first half of the course PS. 205-206. Prerequisite: MS. 105-106. Corequisites: PS. 207, MS. 353. May be taken for credit without PS. 206. Offered 1, 2, 3.

Theory of mechanics, heat, sound, electricity and light. Primarily for physics majors and engineering students.

PS. 206.—General Physics. 4 hours. 3 credits. The second half of the course PS. 205-206. Corequisites: PS. 208, MS. 354. Offered 1, 2, 3.

PS. 207.—Laboratory for Physics 201 and 205. 3 hours laboratory. 1 credit. The first half of the course PS. 207-208. Corequisite: PS. 201 or 205. May be taken for credit without PS. 208. Offered 1, 2, 3.

PS. 208.—Laboratory for Physics 202 and 206. 3 hours laboratory. 1 credit. The second half of the course PS. 207-208. Corequisites: PS. 202, 206. Offered 1, 2, 3.

PS. 209.—Problems in Physics. 1 hour. 1 credit. Corequisite: PS. 205. Offered 1.

Designed primarily for physics majors or other qualified students who desire more problem work than is afforded in PS. 205.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PS. 210.—Problems in Physics. 1 hour. 1 credit. The second half of course PS. 209-210. Corequisite: PS. 206. Offered 2.

PS. 307.—Thermodynamics. 3 hours. 3 credits. Prerequisite: one year of general physics. Corequisite: Calculus.

The first and second laws of thermodynamics. Thermodynamical functions and examples of their application in physics, physical chemistry and engineering. Statistical mechanical interpretation of thermodynamical functions.

PS. 309.—Optics. 3 hours. 3 credits. Prerequisite: one year of physics. Corequisite: Calculus. Offered 1.

An intermediate course. Lenses; optical instruments; interference; diffraction; dispersion; polarization; emission of spectra and Bohr theory.

PS. 310.—Optics in the Laboratory. 3 hours. 1 credit. Corequisite: PS. 309. Offered 1.

Selected experiments in refraction, dispersion, diffraction, and polarization.

PS. 311.—Electricity and Magnetism. 3 hours. 3 credits. Prerequisites: one year of college physics and calculus. Offered 2.

Electrostatic field and potential, direct current circuits and instruments, chemical and thermal electromotive forces, properties of dielectrics, magnetic fields, magnetic properties of matter, induced electromotive force, and alternating currents.

PS. 314.—Physics for Teachers. 3 hours. 3 credits. Prerequisite: PS. 201-202.

Topics selected from dynamics, optics, Bohr theory of the atom, electricity and magnetism, X-rays, photoelectricity, and nuclear physics. Designed to meet the needs of teachers and non-physics majors.

PS. 320.—Modern Physics. 3 hours. 3 credits. Prerequisites: one year college physics and calculus. Offered 1.

The discovery of the electron, X-rays, and radioactivity; the Bohr theory; photo-electric effect; X-rays and their applications; the nucleus; the neutron, the positron, the meson; high voltage production; nuclear reactions, and atomic energy.

PS. 321.—Nuclear Physics. 3 hours. 3 credits. Prerequisites: one year of college physics and calculus. Offered 2.

The elementary theory of the nucleus, nuclear disintegrations, natural and artificial radio-activity, alpha, beta and gamma rays, neutrons, positrons, deuterons and nuclear fission. The principles of operation of equipment used in nuclear research.

PS. 402.—Electrical Measurements. 3 hours. 1 credit. Prerequisite: PS. 311. Offered 1.

Laboratory practice in the theory and use of electrical instruments. Experiments include high and low resistance measurements, the potentiometer, the ballistic galvanometer, magnetic properties of iron, measurements of self and mutual inductance and capacitance by various methods, air-core transformer, and series and parallel resonance. The student is allowed some choice of experiments to meet his individual needs.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PS. 424.—Chemical Physics. 3 hours. 3 credits. Prerequisites: PS. 320 and two years of chemistry.

Molecular dipole moments as determined from dielectric measurements; molecular and nuclear structures as determined from band spectra, Raman spectra, X-ray and electron diffraction, and microwaves.

PS. 430.—Individual Work. 1 or 3 credits. Prerequisite: 12 hours of Physics. Offered 1, 2, 3.

Qualified undergraduate students may study selected topics in Physics. Available for full credit in subsequent sessions with change of content.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

PS. 501.—Electronic Laboratory. 6 hours laboratory. 2 credits. Prerequisite: PS. 311.

Fundamental properties of electron tubes, thermionic conduction, gas conduction; semi-conductors; amplification and its limitations; some essential properties of lumped and distributed circuits.

PS. 502.—Electric and Magnetic Fields. 3 hours. 3 credits. Prerequisites: two years of college physics; calculus. Corequisite: MS. 522.

A systematic development of electromagnetic theory culminating in Maxwell's equations. Field concepts and vector methods are used throughout.

PS. 504.—Research Techniques. 1 hour, and 4 hours laboratory. 3 credits. Prerequisite: PS. 309. Offered 1.

Theory and practice of laboratory techniques most frequently required in research problems. Includes manipulation of glass, production and measurement of vacua, application of kinetic theory to vacuum problems, design and construction of apparatus, generation of optical surfaces, application of physical optics to the testing of optical surfaces, scientific photography, materials of research. Prerequisite for graduate research.

PS. 505.—Theoretical Mechanics. 3 hours. 3 credits. Prerequisites: two years of college physics; calculus. Corequisite: MS. 521. Offered 1.

Statics of systems of rigid bodies. Motions of particles and of rigid bodies under constant and variable forces.

PS. 506.—Advanced Theoretical Mechanics. 3 hours. 3 credits. The second half of the course PS. 505-506.

Selected topics, in addition to the subject matter of PS. 505, to meet the needs of students desiring a more complete course in Theoretical Mechanics.

PS. 507.—Advanced Modern Physics. 3 hours. 3 credits. Prerequisites: two years of college physics and calculus.

A quantitative development of special topics in modern physics chosen from the following general areas: radiation, relativity, quantum mechanics, atomic structure, photons.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PS. 508.—Introductory Solid State Physics. 3 hours. 3 credits. Prerequisite: PS. 320 or 321.

A general elementary introduction to concepts of solid state physics. Review of aspects of modern physics needed for solid state physics. Molecular binding; energy bands in solids; electrical, thermal and magnetic properties of solids; imperfections in solids; semiconductors; and physical electronics.

PS. 514.—Physics for Nuclear Engineers. 6 hours. 6 credits. Prerequisite: PS. 317 or equivalent. Offered 1, 2.

Fundamentals of physics, theory of the nucleus, nuclear disintegration, natural and artificial radioactivity, statics of systems of particles, rigid bodies, motions of particles and of rigid bodies under constant and variable forces, the concept of a collision, the Maxwell-Boltzmann distribution, quantum mechanics, experimental foundations of nuclear physics. Laboratory 2 hours per week.

PS. 519.—Laboratory Techniques in Nuclear Physics. 3 hours. 1 credit. Prerequisite: PS. 317.

Laboratory practice in the theory and use of equipment necessary in the field of nuclear physics. Experiments include the Geiger counter and its applications in the detection of alpha, beta, gamma rays, neutrons and positrons; the study of radioactivity; coincidence counting; scaling circuits; cosmic ray study; Wilson cloud chamber, the Van de Graaff electrostatic generator, and nuclear reaction.

PS. 568.—Biophysics. 3 hours. 3 credits. Prerequisites: PS. 320, one year of chemistry and one year of biology.

Radioactivity. Passage of radiation through matter. Actions of radiation on living cells, including bacteria, rickettsia and viruses. The electron microscope; instruments for detection and measurement of radiation. Study of bio-electric phenomena; electrophoresis; properties of colloids. Theory of Brownian movement applied to the phenomena of osmosis and diffusion. Surface phenomena; chromatography.

GRADUATE COURSES

Except where otherwise stated an undergraduate major in physics or equivalent is a prerequisite for the following courses.

A reading knowledge of German is usually required of the candidates for the M. S. degree.

In general, a student will be expected to complete the work for the M. S. degree before continuing work for the Ph.D. In addition to German, a reading knowledge of French or Russian will be required of the candidate for the Ph.D.

PS. 601.—Theoretical Physics. 3 hours. 3 credits. Offered 1.

Review of vector analysis; dynamics of systems of particles and rigid bodies; elasticity; fluid dynamics.

PS. 602.—Theoretical Physics. 3 hours. 3 credits. Offered 2.

Electromagnetic theory; field concepts and scalar and vector potentials; Maxwell equations; propagation of electromagnetic waves; boundary phenomena; dipole radiation field.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PS. 603.—Kinetic Theory of Gases and Statistical Mechanics. 3 hours. 3 credits.

Kinetic Theory of Gases: collisions, temperature; gas laws, Maxwell's distribution law; transport phenomena. Statistical Mechanics: classical and quantum distribution laws, entropy, specific heats of gases and solids, black-body radiation, thermionic emission.

PS. 604.—Conduction of Electricity Through Gases. 3 hours. 3 credits. Prerequisite: PS. 502.

Theory, problems, and applications of gaseous electrical conduction designed for physics and engineering students. Subject matter includes the topics: kinetic theory of gases, atomic structure, ionization processes, emission phenomena, space charge, gaseous breakdowns, spark, glow and arc discharges at low and high pressures.

PS. 607.—Advanced Electronics. 3 hours. 3 credits. Prerequisite: PS. 501.

Properties of circuits with lumped constants and of circuits with distributed constants. Fundamental properties of electron tubes, narrow and wide band amplifiers; oscillators including the magnetron; circuit analysis; electron and ion accelerators.

PS. 610.—Advanced Electromagnetic Theory. 3 hours. 3 credits. Prerequisite: PS. 602.

Propagation in crystals; wave guides and cavities; diffraction; linear antenna; general solutions of one dimensional wave equation; phase, group and signal velocities; four dimensional space-time symmetry of field equations; field of moving charge.

PS. 612.—Elements of Quantum Mechanics. 3 hours. 3 credits. Prerequisites: PS. 320, MS. 521-522. Offered 2.

Introduction to the theory of Quantum Mechanics, for students of physics and chemistry.

PS. 615.—Physics of the Solid State. 3 hours. 3 credits. Prerequisite: PS. 612.

Theoretical interpretation of mechanical, magnetic, electrical, and optical properties of solids.

PS. 620.—Theory of Optical Spectra. 3 hours. 3 credits. Prerequisite: PS. 612.

Optical spectra of atoms, with emphasis on the interpretation of these spectra in terms of atomic structure. Introduction to the theory of molecular spectra.

PS. 621.—Molecular Spectra. 3 hours. 3 credits. Prerequisites: PS. 612, 620.

An introduction to the theory of molecular spectra treating primarily the case of diatomic molecules. Emphasis is placed on the interpretation of spectra in terms of the physical and chemical properties of the molecular system.

PS. 623.—Seminar in Modern Theory. 1 or 3 credits. Offered 1, 2.

Some particular phase of the most recent developments in theoretical physics is taken up in detail.

PS. 625.—Experimental Foundations of Nuclear Physics. 3 hours. 3 credits. Prerequisite: PS. 317. Corequisite: PS. 612.

The study of nucleus, nuclear reactions, radioactivity, interaction of radiation with matter, radiation detecting devices, accelerating devices; experimental evidence will be employed as a basis for the discussion.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PS. 627.—X-Rays. 3 hours. 3 credits. Prerequisite: PS. 320.

The classical and quantum mechanical theories of the production of X-rays, and their applications in the determination of crystal structure.

PS. 628.—Statistical Mechanics and Thermodynamics. 3 hours. 3 credits. Prerequisites: PS. 603 and 612.

Classical treatment of the first and second laws of thermodynamics. Thermodynamic concepts and relations; application to systems of one or more components and phases. The Nernst heat theorem and the so-called third law. The methods of statistical mechanics; partition functions; canonical ensembles. Derivation of the laws of thermodynamics. Modern concept of entropy; quantum-mechanical treatment of the third law.

PS. 629.—Relativity. 3 hours. 3 credits.

An introduction to Einstein's theory of special and general relativity employing tensor analysis.

PS. 630.—Individual Work. 1 or 3 credits. Offered 1, 2, 3.

Experiments on a particular topic of physics, a review of classical experiments, or the development of an assigned experimental problem. The work will be assigned to meet the needs and interests of the particular student.

PS. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

PS. 701.—Advanced Quantum Mechanics. 3 hours. 3 credits. Prerequisite: PS. 612.

Atomic structures, mathematical approximations, advanced collision theory, semi-classical radiation theory, relativistic wave equations, and quantum electrodynamics.

PS. 702.—Theoretical Nuclear Physics. 3 hours. 3 credits. Prerequisite: PS. 625.

The application of quantum theory to a study of the nature of nuclear particles including range-energy relations, the deutron, scattering theory, exchange forces, pair production, and pile theory.

PS. 703.—Meson Physics. Prerequisites: PS. 612 (Quantum Mechanics I) and PS. 625 (Experimental Nuclear Physics).

Observed properties of pi and mu mesons; application of quantum field theory to the analysis of meson interactions; classification of elementary particles; recent experimental and theoretical developments in the field of heavy mesons and hyperons.

PS. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2, 3.

PLANT PATHOLOGY

Instructional Staff 1956-57

Decker, Phares, Head; Anderson, C. W., Arnold, Lillian E., Conover, R. A., Magie, R. O., Miller, H. N., Muller, A. S., Owen, J. H., Ruehle, G. D., Walter, J. M., Weber, G. F., West, Erdman.

Prerequisites to any course in Plant Pathology are BTY. 101 and 102. PT. 321 is prerequisite to courses except PT. 303, PT. 325, PT. 434 and PT. 634. PT. 434 is prerequisite to PT. 507, PT. 508 and PT. 634.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PT. 303.—Introductory Economic Nematology. Identical with EY. 303, SLS. 303, and VY. 303. 2 hours, and 2 hours laboratory. 3 credits. Prerequisites: C-61 and BLY. 161, or BTY. 101-102. Offered 1. (For description see EY. 303.)

PT. 321.—Plant Pathology. 1 hour, and 4 hours laboratory. 3 credits. Offered 1, 3.

Plant diseases caused by mechanical injury, environmental factors, parasitic bacteria, fungi, and other plants and their economic importance; life cycles and role of parasitic fungi and bacteria; methods of control of plant diseases.

PT. 325.—Forest Pathology. 1 hour, and 4 hours laboratory. 3 credits. Offered 2.

Tree diseases caused by mechanical injury, environmental factors, parasitic bacteria, fungi and other plants; life cycles and role of parasitic fungi and bacteria; the economic importance and control of plant diseases.

PT. 421.—Fungicides. 1 hour, and 4 hours laboratory. 3 credits. Offered 1, even year.

Fundamental composition, methods of preparation, manner of application and limits of safety of fungicidal sprays and dusts.

PT. 422.—Vegetable Diseases. 1 hour, and 4 hours laboratory. 3 credits. Offered 2.

The most destructive diseases of beans, cabbage, celery, cucumbers, eggplant, lettuce, peppers, potatoes, tomatoes, watermelons and other vegetable crops grown in Florida and the recognition of certain vegetable diseases originating elsewhere.

PT. 423.—Fruit Diseases. 1 hour, and 4 hours laboratory. 3 credits. Offered 2.

Diseases of subtropical and tropical fruits, such as citrus, avocado, banana, fig, guava, loquat, mango, papaya, persimmon, pineapple, and other fruit crops grown or marketed in Florida, including apple, bramble, cherry, grape, peach, pear, plum and strawberry.

PT. 424.—Field Crop Diseases. 1 hour, and 4 hours laboratory. 3 credits. Offered 1.

Characteristics, cause and control of the diseases of the principal farm crops such as alfalfa, barley, clover, corn, cotton, cowpeas, grasses, lupine, oats, peanuts, rice, rye, sorghum, soybeans, sugar cane and tobacco.

PT. 425.—Diseases of Ornamental Plants. 1 hour, and 4 hours laboratory. 3 credits. Offered 1.

Diagnosis and control of the prevalent diseases of annuals, bulbs, and perennial herbaceous and shrubbery ornamental plants in Florida.

PT. 426.—Market Pathology. 1 hour, and 4 hours laboratory. 3 credits. Offered 1.

Acquaintance with diseases, detection and recognition of deterioration of perishable plants and plant products occurring at origin, in transit and at destination, including storage and retail market.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PT. 433.—Citrus Diseases. 1 hour, and 4 hours laboratory. 3 credits. Prerequisite: PT. 321. Offered 2.

Study of the diseases of citrus, diagnostic characteristics and control.

PT. 434.—Mycology. 1 hour, and 4 hours laboratory. 3 credits. Offered 2.

A study of fungi that pertains specifically to their nomenclature and basic classification according to recognized standards.

GRADUATE COURSES

Prerequisites: (1) Bachelor's degree. (2) PT. 321 or equivalent. (3) Thirty semester hours in biological sciences, 15 of which should be in botany.

PT. 605.—History of Plant Pathology. 1 hour 1 credit. Offered 1, 3.

A correlation of recorded historical events and the trends and development of plant pathology as an exploration of our current knowledge of plant diseases.

PT. 606.—Plant Pathology Literature. 3 hours laboratory. 1 credit. Offered 2, 3.

The knowledge of existing and available source material, current technical publications dealing with plant diseases and their evaluation as aids in conducting research.

PT. 607.—Plant Disease Collection. 6 hours laboratory. 2 credits. Offered 1, 3.

The collection, identification, and preservation of plant diseases and fungi, stressing those of economic importance in Florida and those possessing distinctive taxonomic characteristics.

PT. 608.—Plant Disease Collection. 6 hours laboratory. 2 credits. Offered 2, 3.

The second half of PT. 607.

PT. 609.—Methods in Plant Pathology. 1 hour, and 6 hours laboratory. 3 credits. Offered 1, odd year.

Technical equipment and the manner of its operation for the acquisition and evaluation of experimental data.

PT. 611.—Diseases of Sub-Tropical and Tropical Plants. 1 hour, and 6 hours laboratory. 3 credits. Offered 2, even year.

Diseases of crop plants growing in tropical America, such as avocado, banana, beans, cacao, citrus, coconut, coffee, corn, cotton, guava, mango, pineapple, potatoes, sugar cane, tobacco, wheat and others.

PT. 622.—Bacterial Diseases of Plants. 1 hour, and 6 hours laboratory. 3 credits. Offered 1, odd year.

The development of present knowledge of plant diseases caused by bacterial pathogens correlated with the investigation by experimental methods of a selected disease.

PT. 623.—Advanced Plant Pathology. 1 or 2 hours, and 6 or 12 hours laboratory. 3 or 6 credits. Offered 1, 2, 3.

A study of life histories of parasitic organisms in relation to the host plant; environmental factors influencing the development of diseases; all diseases of certain crop plants and specific diseases common to a wide variety of hosts.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PT. 632.—Nematode Diseases of Plants. 1 hour, and 6 hours laboratory. 3 credits. Offered 1, 2.

Diseases of crop plants caused by nematodes; symptoms, hosts, distribution, importance, dissemination and control, also classification, identification and pathogenicity of the parasites.

PT. 633.—Physiology of the Fungi. 1 hour, and 6 hours laboratory. 3 credits. Offered 2, odd year.

Physiological studies of growth characteristics of fungi on various media in regard to their respiration, penetration, reaction, reproduction, and response to variable nutrient media, light, temperature, gas concentrations, moisture, and antibiotics.

PT. 634.—Industrial Mycology. 1 hour, and 6 hours laboratory. 3 credits. Offered 1, even year.

The fundamentals of conditions of preservation and deterioration of domestic and commercial products, as pertaining to the identification, pathogenicity, propagation and control of associated fungi.

PT. 635.—Virus Diseases of Plants. 1 hour, and 6 hours laboratory. 3 credits. Offered 2, even year.

Symptons, range, importance, transmission, properties, classification and control of plant viruses as applied to Florida.

PT. 655.—Seminar. 1 hour. 1 credit. Offered 1, 2.

Presentation and discussion of literature, methods and research pertaining to plant diseases.

PT. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

PT. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2, 3.

POLITICAL SCIENCE

Instructional Staff 1956-57

Dauer, M. J., Head; Bartley, E. R., Beth, L. P., Carleton, W. G., Diamant, A., Dovell, J. E., Finkle, J. L., Hartmann, F. H., Havard, W. C., Kantor, H., Mason, B. B., Rakove, M. L., Svarlien, O., Taracouzio, T. A., Wolff, G. E., Yalem, R. J.

The department offers general courses in political science, and more specialized offerings in public administration, and international affairs and foreign service training.

Students registering in Political Science should take note of prerequisites as listed in the course descriptions. Both PCL. 201, American Federal Government, and PCL. 202, State and Local Government, are required of Political Science majors in the College of Arts and Sciences.

Graduate courses and seminars are offered leading to both the M.A. and Ph.D. degrees. These courses are numbered in the 600 series and are open only to graduate students.

PCL. 201.—American Federal Government. 3 hours. 3 credits. Offered 1, 2.

Basic principles of the Federal Constitution. Political parties and the electoral process. The machinery and functions of the federal government.

The statement "Offered 1" means offered first semester; 2, second semester; 3. summer session.

PCL. 202.—American State and Local Government. 3 hours. 3 credits. Offered 1, 2.

State constitutions, political parties, and politics. State legislatures, courts, and chief executives. The functions of state governments. City and county government.

PCL. 204.—Elements of Political Science. 3 hours. 3 credits. Prerequisite: C-1 and PCL. 201. Offered 1, 2.

The nature of the State; political forces operating through public opinion; conflicting ideologies; the scope of government. A general treatment of some of the problems and methods of political science.

PCL. 209.—International Relations. 3 hours. 3 credits. Prerequisite: C-1 or equivalent. Offered 1, 2.

The nature of international relations; nationalism, imperialism, militarism, armaments; history of international relations; foreign policies; functions and problems of democracy; international organization; the United States.

PCL. 210.—International Relations. 3 hours. 3 credits. Prerequisite: PCL. 209. The second half of the course PCL. 209-210. Offered 1, 2.

PCL. 400.—Political Science for Teachers. 3 hours. 3 credits.

Special course for graduate students in College of Education. Designed for teachers who are in need of: (1) special topics; or (2) certain areas not covered in their general undergraduate work in the Social Sciences; or (3) needing additional work in certain fields. May be taken more than once when content is different.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

For undergraduates, upper division standing, including 12 hours of the social sciences, is necessary for admission to 500 courses, plus specific requirements in political science as indicated for the course.

A limited number of 500 courses may be taken for graduate major credit with approval of the student's graduate Supervisory Committee and the department head. Additional work in these courses is required of graduate students.

PCL. 501.—American Constitutional Law. 3 hours. 3 credits. Prerequisite: PCL. 201. Offered 1.

A complete study and analysis of the Federal Constitution, with study and briefing of leading cases in constitutional law.

PCL. 502.—American Constitutional Law. 3 hours. 3 credits. Prerequisite: PCL. 501. The second half of the course PCL. 501-502. Offered 2.

PCL. 503.—International Law. 3 hours. 3 credits. Prerequisite: PCL. 209-210 or PCL. 201. Offered 1.

Study of the main principles of the Law of Nations; case study to illustrate its application; the World Court; the War Crimes trials; decisions in the United States involving questions of International Law.

PCL. 504.—International Law. 3 hours. 3 credits. Prerequisite: PCL. 209-210 or PCL. 201. Second half of the course PCL. 503-504.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PCL. 505.—History of Political Theory. 3 hours. 3 credits. Prerequisite: 6 hours of Political Science. Offered 1.

Leading political theorists from Plato and Aristotle to Hobbes.

PCL. 506.—History of Political Theory. 3 hours. 3 credits. Prerequisite: 6 hours of Political Science. The second half of the course PCL. 505-506. Offered 2.

Leading political theorists from Hobbes to the present.

PCL. 507.—Comparative Government. 3 hours. 3 credits. Prerequisite: 6 hours of Political Science. Offered 1.

The government and politics of Great Britain and the Commonwealth of Nations. Special emphasis on historical, cultural, social, and economic determinants of current institutions and policies. Constitutions, parties, legislatures, executives, civil service systems, law, and local government.

PCL. 508.—Comparative Government. 3 hours. 3 credits. Prerequisite: 6 hours of Political Science. The second half of the course PCL. 507-508. Offered 2.

The government and politics of France, Italy, Germany, and the U.S.S.R. Special emphasis on the historical, cultural, social, and economic determinants of current institutions and policies. Constitutions, parties, legislatures, executives, civil service systems, law, and local government. A comparative analysis of the theory and practice of modern totalitarianism.

PCL. 509.—American Foreign Policy. 3 hours. 3 credits. Prerequisite: PCL. 209-210 or HY. 245-246. Offered 1.

The United States in world affairs. Analysis of American foreign policy, past and present, in order to bring out the basic policies and the forces behind these policies.

PCL. 511.—Public Administration. 3 hours. 3 credits. Prerequisite: PCL. 201. Offered 1.

A survey of the scope, nature and trends in the field of governmental management. Study of administrative organization and action, fiscal and personnel management, administrative law, and public relations.

PCL. 512.—Local Government and Administration. 3 hours. 3 credits. Prerequisite: PCL. 201-202. Offered 2.

The various forms of city, county, and district government; the commission, council-mayor, and council-manager forms for city government; the commission and manager forms for county government; trustee and governing board forms for district governments. Local-state relationships. Problems of local government administration.

PCL. 515.—Public Personnel Administration. 3 hours. 3 credits. Prerequisite: PCL. 511. Offered 1.

Personnel practices of federal, state, county and city governments. Selection, training, promotion, discipline, management, classification of positions, removal, Merit System.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PCL. 516.—Administrative Law. 3 hours. 3 credits. Prerequisite: PCL. 201. Offered 2.

Administrative process and its role in the American Constitutional System, including the legal nature of regulatory authority, the status and liability of administrative officers, administrative tribunals, and judicial review of administrative actions.

PCL. 517.—Legislation. 3 hours. 3 credits. Prerequisite: PCL. 201. Offered 2.

The legislative process. Bicameralism vs. Unicameralism. Legislative qualifications. Legislative procedure. Lobbies and pressure groups.

PCL. 520.—Political Parties. 3 hours. 3 credits. Prerequisite: 6 hours in Political Science including PCL. 201. Offered 1.

The composition of American political parties. The distinction between political parties and pressure groups; what groups compose our major parties and our minor parties; businessmen, farmers, white-collar employees, wage-earners, and racial and religious groups in politics; an analysis of party and pressure politics in all sections and states of the United States, with particular attention to the South and Florida.

PCL. 521.—Political Parties. 3 hours. 3 credits. Prerequisite: 6 hours in Political Science including PCL. 201. The second half of the course PCL. 520-521. Offered 2.

The organization and structure of American political parties. Prerequisites of voting; party committees and party organizations; political bosses and political machines; party coventions and party primaries; the running of political campaigns; campaign finances; the engineering of consent; propaganda and public opinion; political personalities and political availability; ballots and voting machines; the voters' verdict.

PCL. 522.—Government in the Far East. 3 hours. 3 credits. Prerequisite: 6 hours of Political Science or HY. 382.

Analysis and description of the theory and practice of government in China including the Empire, the First and Second Republics and the Peoples' Democracy. Analysis and description of theory and practice in Japan under the Empire and under the Constitutional Monarchy. Analysis of the role of the United States in the occupation governments of Japan and Korea.

PCL. 524.—Advanced International Relations. 3 hours. 3 credits. Prerequisites: PCL. 209-210. Offered 2.

Particular emphasis on the application of basic principles of international relations to major and continuing problems; the new balance of power in Europe and Asia; Titoism, the new Germany and Japan; the U. N. and Korea.

PCL. 531.—Political Behavior. 3 hours. 3 credits. Prerequisites: PCL. 201 and one from the following courses: ES. 203, PSY. 211, or MS. 310.

Alternative concepts of political behavior. The semantics of political behavior. Quantitative analysis of political behavior. Applications.

PCL. 540.—International Relations of the American Republics. 3 hours. 3 credits. Prerequisites: PCL. 209-210 or advanced standing in Inter-American Studies.

Major emphasis on the foreign policies of Latin American states *vis-a-vis* one another. Brief consideration of reciprocal relations of Latin American republics with other powers.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PCL. 541.—Government and Politics of South America. 3 hours. 3 credits. Prerequisite: PCL. 201. Offered 1.

The governmental and political practices of South American republics.

PCL. 542.—Government and Politics of the Caribbean Countries. 3 hours. 3 credits. Prerequisite: PCL. 201. The second half of the course PCL. 541-542. Offered 2.

The governmental and political practices of the Caribbean countries.

PCL. 551.—Public Law and Business. 3 hours. 3 credits. Prerequisites: ES. 205-206.

Constitutional power and business regulations. Right to do business. Prohibition of business. Protection and development of favored industries. Restraint of trade. Price-fixing. Constitutional power in relation to quality, quantity, and purity of product.

PCL. 591.—Masterpieces in the Social Sciences. 3 hours. 3 credits. Prerequisites: Senior standing and a major in one of the social sciences. Identical with ES. 591, HY. 591, and SY. 591. Offered 1.

A reading course for students majoring in the Social Sciences and others with sufficient background in the Social Sciences. Enrollment limited to students having approval of their advisor in the major field and the course chairman. Selected books of representative authors who have contributed most to the fields of economics, history, sociology, political science, geography, and cultural anthropology will be read and evaluated.

PCL. 592.—Masterpieces in the Social Sciences. 3 hours. 3 credits. Prerequisites: Senior standing and a major in one of the Social Sciences. The second half of the course PCL. 591-592. Identical with ES. 592, HY. 592 and SY. 592.

GRADUATE COURSES

Both the Master of Arts and the Doctor of Philosophy degrees are offered by the Department of Political Science. Students desiring to take work leading to these degrees must have completed an undergraduate major in Political Science or the equivalent of such a major. A student not having this undergraduate concentration will take foundation work. As a minimum requirement, half of the work for the major for the M.A. degree must be at the 600 level, including at least one seminar in each field offered; for the Ph.D. degree, a larger proportion of 600 level work will be required, including seminars in each field offered.

For the M.A. degree, the student must take a minimum of 12 hours of work concentrated within two of the fields of Political Science. In addition a minor must be completed in a separate but related discipline. The completion of an examination in one foreign language is required. The supervisory committee for those candidates for the M.A. degree whose major interest is in Public Administration, for government employment, and who do not plan on work toward the doctorate, may consider waiving the language requirement. In such case of waiver of the language requirement six additional hours work in addition to the major and minor will be required.

For the Ph.D. degree, the student will normally pursue a minimum of two years of graduate seminar and course work in preparation for the qualifying written and oral examinations leading to candidacy. A prerequisite to taking these examinations is the satisfactory completion of the language requirement. The qualifying examinations will be in four fields selected by the student with the approval of his supervisory committee from the following: (1) Political Theory, (2) American Government and Politics, (3) Comparative Government, (4) International Relations and Organization, (5) International Law and Organization, (6) Public Law, and (7) Public Administra-

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tion. In addition, at the time of the qualifying examinations, the student will be examined in one minor field and will take a general examination in competence in Political Science. Following advancement to candidacy, the third year of work will be devoted to the preparation of the dissertation.

Attendance by each graduate student majoring in Political Science is required at the hour and a half Departmental Colloquium monthly on a Thursday afternoon at 2:30 P. M. This colloquium will discuss papers written by staff and by graduate students.

PCL. 613.—Seminar in Scope and Method. 3 hours. 3 credits. Offered 1.

Research methods in political science. Bibliography. Development of political science.

PCL. 625.—Seminar in Public Administration. 3 hours. 3 credits. Offered 1.

A careful study of the methods of research in Public Administration and their application to such major problems in the field as personnel, fiscal organization, and planning.

PCL. 626.—Seminar in Public Administration. 3 hours. 3 credits. The second half of the course PCL. 625-626. Offered 2.

PCL. 627.—Seminar in International Relations and Organization. 3 hours. 3 credits. Offered 1.

An analytical study of the basic forces of international politics; a critique of the theories of imperialism, geopolitics, nationalism, and the balance of power; the problems of total war, national power, and world opinion; the foreign policies of the great powers.

PCL. 628.—Seminar in International Relations and Organization. 3 hours. 3 credits. The second half of the course PCL. 627-628. Offered 2.

An analytical study of the institution and practice of diplomacy; international diplomatic conferences; the League of Nations and the United Nations; public international unions; basic problems of international organization including voting, sanctions, and collective security; world government.

PCL. 630.—Individual Work. 3 hours. 3 credits.

A reading or research course in such areas of Political Science as are needed by the graduate students. May be elected for full credit in subsequent sessions with change of content.

PCL. 631.—Seminar in Latin-American Government and Politics. 3 hours. 3 credits. Offered 1.

Directed study and research in the field of Latin-American government and politics. A knowledge of Spanish or Portuguese is required. French may be substituted with the permission of the professor.

PCL. 632.—Seminar in Latin-American Government and Politics. 3 hours. 3 credits. The second half of the course PCL. 631-632. Offered 2.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PCL. 633.—Seminar in Problems of American Federal Government. 3 hours. 3 credits. Offered 1.

Directed research and analysis of selected problems in American federal government and administration.

PCL. 634.—Seminar in State and Local Government. 3 hours. 3 credits. Offered 2.

Graduate seminar in the bibliography, methodology, and research topics of American state and local government.

PCL. 635.—Seminar in Political Theory. 3 hours. 3 credits. Offered 2.

Some problems of political theory. Idealism vs. pragmatism. Theories as to the scope of government. Authority vs. individualism.

PCL. 636.—Seminar in Political Theory. 3 hours. 3 credits. The second half of PCL. 635-636.

Theories of democracy. Theories of political causation. Theories of absolute government.

PCL. 637.—Seminar in Comparative Government. 3 hours. 3 credits. Offered 1.

The major institutions, functions, and problems of representative major foreign powers; the nature and extent of state activity, the various methods of distributing and separating political power in the modern state, political parties, legislatures, executives and civil service, judiciaries and legal systems. Methodology and bibliography of comparative government.

PCL. 638.—Seminar in Comparative Government. 3 hours. 3 credits. The second half of the course PCL. 637-638. Offered 2.

PCL. 639.—Seminar in Public Law. 3 hours. 3 credits. Offered 1.

Judicial interpretation and enforcement of written constitutions. Separation of powers. The American federal system. Powers of the federal government. Due process and equal protection.

PCL. 640.—Seminar in Public Law. 3 hours. 3 credits. The second half of the course PCL. 639-640. Offered 2.

PCL. 641.—History of American Political Theory. 3 hours. 3 credits.

Study of the background of American theory. Historical treatment from the Mayflower Compact to the contemporary period.

PCL. 642.—Russian Government. 3 hours. 3 credits.

Political heritage of the Revolution. Structural features of the Soviet system. Law-making and public administration. The Soviet state and the individual.

PCL. 643.—Seminar in International Law. 3 hours. 3 credits. Offered 2.

Directed study and research in the field of International Law, including the law of International Organization.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PCL. 644.—Seminar in International Law. 3 hours. 3 credits. The second half of the course PCL. 643-644.

Continuation of study and research in International Law and the Law of International Organization.

PCL. 645.—Seminar in Political Parties. 3 hours. 3 credits. Offered 2.

An intensive comparative study of group politics in two-party states and one-party states; of loosely organized and tightly organized states; of machine and non-machine states; of primary states and mixed primary-convention states. Some persistent problems of political parties; to what extent autonomous and to what extent a legal agency of the government; democratizing the organization of parties and their methods of nominating; party responsibility in government and in legislative bodies.

PCL. 646.—Latin American Political Theory. 3 hours. 3 credits. Prerequisite: a reading knowledge of Spanish, and undergraduate work in Latin-American government.

Writings and theories of the leading Latin American political thinkers from Alberdi, Sarmiento, and Marti, to contemporary figures.

PCL. 647.—Seminar in Political Behavior. 3 hours. 3 credits. Prerequisite: PCL. 531 or equivalent.

Advanced studies in the problems of political behavior: concepts, semantics of politics and statistical applications and analysis.

PCL. 650.—Government and the Planning Process. 3 hours. 3 credits. Offered 2.

The nature and scope of governmental planning, its relation to other governmental activities, and its administrative and organizational problems. Case studies of federal, regional, state, and local planning agencies. Special emphasis on planning as a governmental process.

PCL. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

PCL. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2, 3.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

POULTRY HUSBANDRY

Instructional Staff 1956-57

Mehrhof, N. R., Head; Driggers, J. C., Tarver, Fred R., Jr.

PY. 201.—Fundamentals in Poultry Production. 2 hours, and 2 hours laboratory. 3 credits. Offered 1.

Economic importance of the industry; breeds and varieties; principles of production and exhibition judging; location and construction of buildings; breeding; hatching; brooding; rearing pullets; managing layers; feeding; marketing diseases. One or more field trips to commercial poultry farms required.

PY. 312.—Incubation, Brooding and Rearing. 2 hours, and 2 hours laboratory. 3 credits. Offered 2.

A study of the embryology of the chick; different types of hatchery equipment; incubation principles and practices; brooding equipment; methods of brooding chicks; rearing pullets; and caponizing. Chick sexing and judging. One or more field trips to hatcheries, broiler plants and poultry farms required.

PY. 317.—Marketing Poultry Products. 2 hours, and 2 hours laboratory. 3 credits. Offered 1.

Preparation of eggs and poultry for market; grading, packing, and storing of eggs and poultry. Study of egg and meat quality, judging eggs. One or more field trips to poultry markets required.

PY. 319.—Grading and Selecting Poultry and Poultry Products. 2 hours laboratory. 1 credit. Offered 1.

Study of Classification and points of excellence. Judging poultry for egg production and exhibition. Grading and selecting poultry meat and eggs.

PY. 414.—Poultry Nutrition. 2 hours. 2 credits. Prerequisite: AL. 312. Offered 2.

Nutritive requirements. Ration calculation, feed formulation, economics, and systems of feeding poultry.

PY. 415.—Poultry Management. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite: PY. 201 or 3 hours in any other poultry husbandry course. Offered 1.

Systematic study of poultry farming; types, farm layouts, successful poultry farms, investment, costs and returns in egg production, and factors relating to costs and returns in egg production. Pullet production, layout of pullet ranges, costs and returns in rearing pullets, and factors affecting costs. One or more field trips to commercial poultry farms.

PY. 416.—Poultry Management. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite: PY. 201 or 3 hours in any other poultry husbandry course. Offered 2.

Hatchery management; location, plans, investment, costs and returns in producing chicks, factors affecting costs and returns. Broiler production: equipment and designs of broiler plants, management of broilers, investment, costs and returns in producing broilers, and factors affecting costs and returns. One or more field trips to hatcheries, broiler plants and commercial poultry farms.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PY. 421.—Seminar. 1 hour. 1 credit. Offered 1.

Selected readings, reports and discussions of current developments in the field of poultry husbandry.

PY. 422.—Seminar. 1 hour. 1 credit. The second half of the course PY. 421-422. Offered 2.

PY. 427.—Poultry Breeding. 2 hours. 2 credits. Offered 1.

Principles of genetics applied to poultry; the laws of heredity governing standard and production characters in poultry. Methods and practices of breeding and analysis of records. One or more trips to poultry breeding farms required.

PY. 429.—Problems in Poultry Production. 1 to 4 credits. Prerequisite: Permission of instructor. Offered 1.

Qualified students may choose a topic or problem for study. Problems that may be selected are housing and equipment, feeding, breeding, marketing, and management. Type and scope of work determine credits allowed.

PY. 430.—Problems in Poultry Production. 1 to 4 credits. The second half of the course PY. 429-430. Offered 2.

GRADUATE COURSES

PY. 614.—Advanced Poultry Nutrition. 1 to 4 credits. Prerequisites: AL. 312 and PY. 414. Offered 2.

Metabolism of essential nutrients, and role of enzymes and hormones in poultry nutrition.

PY. 617.—Advanced Poultry Marketing. 1 to 4 credits. Prerequisite: PY. 317. Offered 1.

Special topics on preparation, storage and marketing of eggs and poultry meat.

PY. 627.—Advanced Poultry Breeding. 1 to 4 credits. Prerequisite: PY. 427. Offered 1.

Systems of breeding, coefficient of inbreeding, transmission of production characters, breeding records and their analysis.

PY. 631.—Advanced Poultry Management. 3 hours. 3 credits. Offered 1, 2.

PY. 670.—Advanced Problems in Poultry Production. 1 to 8 credits. Offered 1, 2.

PY. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PSYCHOLOGY

Instructional Staff 1956-57

Hinckley, E. D., Head; Anderson, R. J., Barrett, A. M., Dixon, J. C., Harlow, J. E., Horne, E. P., Kleemeier, R. W., Kolarik, J. M., Kurtz, A. K., Prophet, W. W., Rethlingshafer, D., Waters, R. H., Williams, O., Wimberly, S. E., Wunderlich, H.

An undergraduate major in psychology in the College of Arts and Sciences must include PSY. 201 and PSY. 202. The remainder of the courses presented for the major will depend upon the educational objective of the student. PSY. 211, 301 and 302 are recommended for students who plan to pursue graduate work in psychology later.

Graduate training is offered through the M.A. degree in most of the recognized areas of psychology and through the Ph.D. degree in the areas of experimental psychology and clinical psychology.

PSY. 201.—General Psychology. 3 hours. 3 credits. Offered 1, 2.

The general topics in the field of psychology. Designed to provide an understanding of human behavior, approached as a natural phenomenon subject to scientific study. The unifying concept is the adaptation of the individual to his physical and social environment.

PSY. 202.—Personality Development. 3 hours. 3 credits. Offered 1, 2.

The mechanisms of personality formation, with special emphasis upon the varieties of human adjustment. The more inevitable problems of human life with their normal and abnormal solutions. The origin and modification of behavior. Processes of motivation and adjustment. Development of personality traits. Techniques of mental hygiene.

PSY. 205.—Social Psychology. 3 hours. 3 credits. Prerequisite: PSY. 201. Offered 1.

Influence of the social environment upon the psychological development of the individual. The influence of the individual on social groups.

PSY. 206.—Psychology Applied to Business and Industry. 3 hours. 3 credits. Not available for major credit in the College of Arts and Sciences. Offered 1, 2.

Application of the principles and methods of psychology to appropriate problems in business and industry. Studies in personnel selection, employment, job analysis, effect of conditions and methods of work on productivity.

PSY. 207.—Psychology of Advertising. 3 hours. 3 credits. Offered 1.

Application of psychological principles to consumer wants and to advertising appeals; consideration of various factors affecting advertising effectiveness; evaluation of methods of measuring effectiveness of advertising in various media.

PSY. 211.—Psychological Measurement. 2 hours, and 3 hours laboratory. 3 credits. Prerequisite: PSY. 201. Offered 1, 2.

Quantitative methods of experimental psychology; collection and treatment of data; correlation; prediction. Nature of measurement, reliability of tests, and the concept of validity and item analysis.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PSY. 301.—Experimental Psychology. 2 hours, and 3 hours laboratory. 3 credits. Prerequisite: PSY. 201. Offered 1.

Elements of scientific method. Adjustment and its organic basis. Experimental studies of sensation, perception, learning.

PSY. 302.—Experimental Psychology. 2 hours, and 3 hours laboratory. 3 credits. Prerequisite: PSY. 201. Offered 2.

Experimental studies of simpler motor phenomena, emotion, motivation, thinking, intelligence, personality.

PSY. 305.—(Identical with SY. 305)—Society and the Individual. 2 hours. 2 credits. Prerequisite: PSY. 201. Offered 2.

A consideration of selected topics in Social Psychology, including Methods of Investigation, Biological Background, Personality and Culture, Socialization, Communication, Social Interaction, Attitudes, Public Opinion and Propaganda.

PSY. 308.—Developmental Psychology. 3 hours. 3 credits. Prerequisite: PSY. 201. Offered 2.

An interpretation of research relating to the development of behavior. Consideration of human development is emphasized and augmented by the study of phylogenetic sequences.

PSY. 312.—Psychology of Exceptional Children. 3 hours. 3 credits. Prerequisite: PSY. 201. Offered 2.

Individual differences, intelligence, feeble-mindedness, dull and backward children, superior and gifted children, speech and motor defects, sensory and neurological disorders, conduct problems, social and emotional maladjustments, and other topics concerning exceptional and mentally peculiar children.

PSY. 318.—Psychology of Music. 3 hours. 3 credits. Prerequisites: PSY. 301, or first year harmony, or one year of Physics.

Perception of musical entities. Musical and aesthetic value. Role of music in personality development and adjustment. Musical talent and learning.

PSY. 324.—The Human Senses. 3 hours. 3 credits. Prerequisite: PSY. 201. Offered 1.

An introductory survey of the knowledge of human senses and their place in perception.

PSY. 410.—Abnormal Psychology. 3 hours. 3 credits. Prerequisites: PSY. 201, 202. Offered 1, 2.

The principal abnormal phases of behavior, and the ways by means of which the individual develops abnormal habits of thinking and acting. A survey of the signs of beginning maladjustment and procedures which may be followed to correct these tendencies. Special attention is given to the prevention and treatment of mental disease.

PSY. 415.—Psychology of Aesthetic Processes. 2 hours. 2 credits. Prerequisite: PSY. 201. Offered 2.

Aesthetic processes considered as empirical psychological events. Aesthetic motivation, selection, appreciation, and production. Characteristics of aesthetic objects and their relation to motivation. Characteristics and origins of tastes. Relation of aesthetic processes to personality adjustment, talent, intelligence, and social groups.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PSY. 421.—An Introduction to Learning. 3 hours. 3 credits. Prerequisite: PSY. 201. Offered 2.

An introductory survey of the significant concepts, experimental methods, and principles of human learning and forgetting.

PSY. 430.—Individual Work. 3 credits. Prerequisites: At least fifteen hours of psychology including PSY. 201, 301, 302, and permission of the Head of the Department. Offered 1, 2.

Qualified students and the instructor concerned may choose a particular problem for investigation or study from the various areas of experimental psychology. A formal written report of the work is required of the student.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

PSY. 503.—Essentials of Psychological Testing. 2 hours, and 3 hours laboratory. 3 credits. Prerequisite: PSY. 211. Offered 1.

Intensive study of theory, principles and methods of measuring abilities. Critical analysis of current tests with laboratory practice in administration and interpretation.

PSY. 504.—The Measurement of Personality. 2 hours, and 3 hours laboratory. 3 credits. Prerequisite: PSY. 211. Offered 2.

Intensive study in the methods of measuring personality, including questionnaires, rating scales, objective measurements and projective techniques. Laboratory practice in interpretation and construction of tests.

PSY. 508.—Comparative Psychology. 2 hours, and 3 hours laboratory. 3 credits. Prerequisite: PSY. 301-302. Offered 1.

Procedures and results in selected areas of animal experimentation. Laboratory training in experimental techniques.

PSY. 509.—Personality Structure and Organization. 3 hours. 3 credits. Prerequisite: PSY. 410. Offered 1.

Basic concepts and findings, techniques of investigation, and survey of contemporary theories of personality structure and organization.

PSY. 512.—Individual and Group Differences. 3 hours. 3 credits. Prerequisites: PSY. 201, 211. Offered 1.

An intensive study of individual and group differences essential to the evaluation of test results and vocational/educational adjustment. The influence of differences in intelligence, age, sex, and ethnic and cultural background on behavior.

PSY. 514.—History of Psychology. 3 hours. 3 credits. Prerequisite: 12 hours of psychology. Offered 1.

A survey of the history of psychology from the time of the Greeks to the present, covering its background in philosophy, the emergence of psychology as a modern, experimental science, and the contributions of movements such as structuralism, functionalism, behaviorism, and Gestalt psychology.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PSY. 516.—Physiological Psychology. 2 hours, and 3 hours laboratory. 3 credits. Prerequisites: PSY. 301-302. Offered 2.

The relation of psychological phenomena to the physiology of receptors, neural system, and effectors.

GRADUATE COURSES

Prerequisites: Twenty-four semester hours in psychology and related fields, of which at least twelve semester hours must be in psychology.

A significant part of the student's work in graduate courses will involve extensive and directed individual study of source materials such as journal articles and other appropriate writings.

A student may not earn a graduate degree in psychology by taking only 500 courses. Courses numbered above 700 are open only to students who have a Master's degree or its equivalent.

A qualifying examination will be required of each student working toward a graduate degree with a major in psychology. The student will not be admitted to candidacy for a graduate degree until he has passed his qualifying examination.

Graduate students either majoring or minoring in this department should secure information regarding requirements in the office of the Head of the Department.

PSY. 601.—Literature in Experimental Psychology. 3 hours. 3 credits. Offered 1.

A consideration of experimental literature in selected areas of psychology.

PSY. 602.—Literature in Experimental Psychology. 3 hours. 3 credits. The second half of the course PSY. 601-602. Offered 2.

PSY. 605.—Advanced Statistical Methods. 2 hours, and 3 hours laboratory. 3 credits. Offered 2.

Application of advanced statistical techniques to psychological data. The techniques of partial multiple, non-linear, biserial and tetrachoric correlation. The use of regression equations on psychological data. The Chi-square test. Tests of significance. Analysis of variance. Factor analysis.

PSY. 610.—Seminar in Psychopathology. 3 hours. 3 credits. Prerequisite: PSY. 410. Offered 1.

Lectures, readings, and discussions of the various forms of mental disorder, with attention to causes, diagnosis, symptons and treatment.

PSY. 612.—Introduction to Psychological Diagnosis. 3 hours. 3 credits. Prerequisites: PSY. 504, 509. Offered 1, 3.

A survey of the basic concepts and a variety of procedures used in evaluating personality and personality maladjustment. Case studies will be analyzed. Ethical and professional problems will be considered.

PSY. 613.—Children's Behavior Disturbances. 3 hours. 3 credits. Prerequisites: PSY. 312, 612. Offered 2.

Intensive study of behavior deviations common to children and adolescents. Emphasis is placed on causative factors of maladjustments ranging from inferiority feelings, aggression, fears, etc. to the psychoneuroses and psychoses such as childhood schizophrenia. A thorough study of play therapy techniques is included.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PSY. 614.—Vocational Appraisal. 2 hours, 3 hours laboratory. 3 credits. Prerequisite: PSY. 612. Offered 2.

Theory and practice in use of psychological data and occupational information in appraising vocational promise.

PSY. 615.—Seminar in Experimental Social Psychology. 3 hours. 3 credits. Offered 1.

Critical study of the literature of social psychology. Special topics to meet the interests and needs of the students. Particular emphasis will be given to study of the bases of social action and the use of the experimental method in the study of psychology as applied to social behavior.

PSY. 618.—Gestalt Psychology. 3 hours. 3 credits. Offered 2.

The principles of Gestalt psychology applied to perception, behavior, memory, learning, personality and social psychology.

PSY. 619.—Advanced Experimental Psychology. 2 hours, and 3 hours laboratory. 3 credits. Prerequisite: PSY. 301 or 302. Offered 1.

Experimental studies in psychophysics, sensation, perception, association, attention, reaction time.

PSY. 620.—Advanced Experimental Psychology. 2 hours, and 3 hours laboratory. 3 credits. Prerequisite: PSY. 301 or 302. Offered 2.

Experimental studies in conditioning, memory, emotions, feelings, attending, and thinking. Laboratory training in techniques of investigation in these fields.

PSY. 621.—Learning. 3 hours. 3 credits. Offered 2.

A presentation and interpretation of the experimental evidence on the influence of various factors on learning and retention.

PSY. 624.—Sensation and Perception. 3 hours. 3 credits. Offered 1.

A presentation and interpretation of the experimental evidence in the field of sensation and perception.

PSY. 626.—Seminar in Experimental Design. 3 hours. 3 credits. Prerequisite: PSY. 605. Offered 1.

The nature and use of the experimental method in psychology. Critical evaluation of selected experiments. The role of quantitative methodology in experimental planning. Practice in the experimental design, including the design of apparatus.

PSY. 630.—Individual Work. 3 hours. 3 credits. Offered 1, 2.

A reading or research course in such areas of Psychology as are needed by graduate students. May be elected for full credit in subsequent sessions with change of content.

PSY. 631.—Practice in Intelligence Testing. 1 hour, and 6 hours laboratory. 3 credits. Prerequisite: PSY. 503. Offered 1.

Extensive practice in the administration, scoring, and interpretation of individual intelligence tests.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PSY. 632.—Mental Test Construction. 2 hours, 3 hours laboratory. 3 credits. Prerequisites: PSY. 503, 605. Offered 2.

Theory and practice in the construction of tests of general aptitude, special aptitude and personality traits. Psycho-physical theory and techniques.

PSY. 633.—Projective Techniques. 3 hours. 3 credits. Prerequisite: PSY. 612. Offered 1.

Review of the historical development of projective techniques. Consideration of the theoretical basis for the use of projective devices in clinical practice. Intensive study of specific projective tests. New application of projective methods to the problems of clinical psychology and psychiatry.

PSY. 635.—Introduction to Psychological Readjustment. 3 hours. 3 credits. Prerequisite: PSY. 612. Offered 2.

Survey of theories and clinical practices including the counseling interview, environmental change, group activity and discussion.

PSY. 637.—Personal Counseling. 3 hours. 3 credits. Prerequisite: Permission of instructor. Offered 2.

Intensive exploration of current theories and practices in personal counseling. Special consideration will be given to the role of the counselor and the nature of the counseling relationship.

PSY. 661.—Seminar in the Psychological Problems of Aging. 3 hours. 3 credits. Offered 2.

Examination of the problems of later maturity, with special emphasis upon current research in this area.

PSY. 669.—Seminar in Motivation. 3 hours. 3 credits. Offered 2.

A detailed account of the factors underlying human motivation approached from both the physiological and psychological viewpoints.

PSY. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2.

PSY. 729.—Dynamics of Individual Behavior. 3 hours. 3 credits. Offered 1.

A systematic exploration of perceptual or personalistic approaches to the understanding of individual behavior and the implications of such theory for major problems in human relations.

PSY. 734.—Seminar in Current Clinical Literature. 3 hours. 3 credits. Offered 1.

Students will be required to do extensive reading on selected topics in the area of clinical psychology.

PSY. 736.—Practicum in Clinical Psychology. 6 credits. Prerequisite: Permission of the instructor. Offered 1.

This course is designed to prepare the student specializing in clinical psychology for his internship. He will be assigned cases in the Psychological Clinic and/or other practicum agencies for a variety of supervised experiences in clinical interviewing, testing, staff presentation and counseling.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

PSY. 743.—Introduction to the Rorschach Test. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite: PSY. 633. Offered 2.

Technique of administration, scoring and fundamentals of interpretation of the Rorschach Test. Students will need test materials and text. The Beck method will be emphasized.

PSY. 750.—Internship in Clinical Psychology. 12 credits. Prerequisites: Admission to candidacy for the Ph.D. degree and specialization in clinical psychology.

The student will be placed in a selected facility on an employment basis where he will work as a clinical assistant under the direct supervision of a certified clinical psychologist.

PSY. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2.

REAL ESTATE

Instructional Staff 1956-57

Chace, J. E., Head; Brewster, Wm., Dehner, A. H., Ring, A.A., Travis, R. W.

RE. 291.—Real Estate Fundamentals. 3 hours. 3 credits. Offered 1, 2, 3.

A survey of the principles and practices essential to successful ownership of real property. The aim is to develop a full understanding of the significance of realty as a commodity and to equip the student with the fundamentals essential to successful real estate investment and enterprise. Classroom lectures and problems place emphasis on the legal, economic and technical aspects of real estate ownership and provide background training for those seeking specialization in the fields of real estate law, brokerage, management, appraising and real estate finance.

RE. 295.—Housing and Home Ownership. 3 hours. 3 credits. Offered 1, 2, 3.

Concerned with the consumption of real estate and the economic, legal and technical aspects of housing from the point of view of the home owner. Stress is laid on the evolution and limitations of property rights, the role of government in the field of housing, principles of home ownership, home construction and design, and the vital problem of when and how to buy a home.

RE. 390.—Property Valuation. 3 hours. 3 credits. Offered 1, 2.

This course is concerned with a study of the social, economic and governmental forces which cause and influence property value. Emphasis is placed on thorough understanding of the principles of value and the steps essential to measurement of value. Class lectures stress the case method of study and the application of principles under the cost, market and income approaches to value. This course is designed to train those who seek to specialize in the field of real estate valuation and to provide an indispensable background for trained specialists in allied fields of investment, building, construction, architecture, and civil engineering.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

RE. 391.—Property Management. 3 hours. 3 credits. Offered 1.

Management of real properties as a part of the real estate business; principles, management and organization; collections, expenditures and services; physical care of the property; records; agent's relation with tenant.

RE. 392.—Problems in Real Estate Brokerage. 3 hours. 3 credits. Offered 2.

Organization and conduct of the real estate brokerage business; social, economic, legal, and ethical responsibilities of the broker; listing and listing methods; advertising and sales; real-estate broker's law; commissions; relationship with the title insurance companies and attorneys.

RE. 393.—Urban Land Utilization. 3 hours. 3 credits. Offered 1, 2.

Land and population; economics of land utilization; urbanization, and urban lands; manufacturing as an urbanizing factor; labor as a factor; transportation and commerce in city location and urbanization.

RE. 490.—Real Estate Appraising. 3 hours. 3 credits. Prerequisite: RE. 390. Offered 1.

Designed to train students in the technique and art of real estate appraising. This course is concerned with the application of the principles of property valuation to the various classes of realty; stress is laid on the character of land value, axioms of valuation and application of valuation procedures via the cost, market, and income approach to real estate value. The case method of instruction is used in order to enable students to prepare independent property appraisal reports.

RE. 491.—Principles and Problems in City Planning. 3 hours. 3 credits. Offered 1.

Relation of city planning to real estate values and developments: use of city plans by realtors; building codes; blighted areas; development of the city center and realty operations; relation of realtors to city-planning engineers.

RE. 492.—Real Estate Finance. 3 hours. 3 credits. Offered 2.

Functions of real estate finances; the loan contract; the mortgage market; elements of mortgage risk; loan policy and administration of loans; analysis of current mortgage market conditions.

RE. 493.—Real Estate Law. 3 hours. 3 credits. Offered 1, 3.

Necessity of learning when to consult a lawyer; fixtures; easements; land descriptions; land titles and interests; deeds; mortgages; foreclosures; landlord and tenant; taxes and assessments; avoidance of "unauthorized practice of law."

GRADUATE COURSES

Though no graduate major may be completed without adequate course work on the 600 or higher level, certain undergraduate courses in real estate are available for graduate credit as part of a candidate's major. These are: RE. 490—Real Estate Appraising; RE. 492—Real Estate Finance; and RE. 493—Real Estate Law.

RE. 690.—Problems in Property Valuation. 3 hours. 3 credits. Offered 2.

This course is concerned with appraising techniques and problems of income producing properties. Detailed study is given to income premises and valuation practices developed by leading valuators in this field. Emphasis is laid on the case method of instruction. Class work is coordinated with field investigation and field reports.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

RE. 692.—Urban Growth and Land Use Patterns. 3 hours. 3 credits. Offered 1.

A study of the economic factors which provide the basis of the urban economy and urban growth. Urbanization; locations of cities and industries; the position of the city in our economy; urban land utilization; public control over urban land utilization; urban land tenure and tenacy; the future of cities.

RE. 693.—Research in Real Estate Brokerage. 3 hours. 3 credits. Offered 1.

A critical study of selected methods and practices of real estate brokerage.

RE. 694.—Problems in Property Management. 3 hours. 3 credits. Offered 2.

A critical study of selected methods and practices of real estate management.

RE. 695.—Problems in Real Estate Finance. 3 hours. 3 credits. Offered 1.

Concerned with techniques of mortgage risk analysis, mortgage risk rating, trading on the equity, and long and short term financing. Detailed study is given to real estate finance problems encountered in slum clearance, subdivision and urban re-development.

RE. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

Directed research and writing for the M.A. degree, taken toward the end of the student's graduate program for credit in addition to the 24 hours required for the master's degree.

RE. 799.—Research and Doctoral Dissertation. 0 to 12 credits. Offered 1, 2, 3.

Directed research and writing for the Ph.D. degree, taken toward the end of the student's graduate program for credit in addition to the hours of regular courses required by the candidate's supervisory committee for the Doctor's degree. The Doctor's degree in the College of Business Administration requires a major study in economics. However, with approval of the student's supervisory committee the subject of the dissertation may be in the field of real estate.

REHABILITATION COUNSELING

Instructional Staff 1956-57

Thomason, B., Chairman; Barrett, A. M.

RC. 640.—An Introduction to Rehabilitation Counseling. 3 hours. 3 credits. Offered 1, 2, 3.

An orientation to the rehabilitation process including a survey of history, principles, philosophy and legal aspects of rehabilitation and related fields. Rehabilitation as a concept of integrated service. Understanding objectives and the organizational basis for rehabilitation programs.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

RC. 641.—Psychological and Sociological Aspects of Rehabilitation Counseling. 3 hours. 3 credits. Offered 1, 2, 3.

Study of social and personal problems of the handicapped; psychological aspects of physical and mental disabilities. Societal attitudes and other environmental factors related to handicapped persons; community organization processes related to responsibility and services for handicapped persons. Nature, limitations and relationships of community resources and agencies to rehabilitation; methods in social case work as applied to rehabilitation counseling.

RC. 642.—Vocational Training and Placement Aspects of Rehabilitation Counseling. 3 hours. 3 credits. Offered 1, 2, 3.

Analysis of job placement and training facilities and ability to relate these through vocational guidance to client capacities and employer expectations. Adaptations of occupational information to rehabilitation counseling, including job analysis, placement and follow-up techniques.

RC. 643.—Medical and Related Aspects of Rehabilitation Counseling. 3 hours. 3 credits. Offered 1, 2.

Medical implications for rehabilitation counselors including anatomy, physiology and pathology of human systems, physical reconstruction, restoration and adaptation; psychological and psychiatric implications in rehabilitation; etiology, prognosis and therapy of the various disabling conditions and disorders with special emphasis on the social and occupational aspects of injury, somatic and psychogenic disability. Feasibility determination, interpretation of medical information to clients and physician-counselor relationships.

RC. 644.—Internship in Rehabilitation Counseling. 6 hours. 6 credits. Offered 1, 2, 3.

This internship will include supervised practice in counseling, case studies, contacts with community social agencies and others, as well as practicum in specific rehabilitation processes. (In some instances previous experience in rehabilitation counseling may be accepted for part or all of this internship.)

RELIGION

Instructional Staff 1956-57

Scudder, D. L., Head; McCoy, C. S.

An undergraduate major, group major, or graduate minor should be worked out with the Department of Religion. As a rule, the pre-ministerial student should elect no more than twelve hours in Religion in order that he may obtain a broad background in the sciences and humanities.

RN. 241.—Introduction to Religion. 3 hours. 3 credits. Offered 1.

An attempt to discover what religion is and does. Religion as a social pattern, a venture of faith, and an orientation to life as a whole.

RN. 242.—Survey of Western Religion. 3 hours. 3 credits. Offered 2.

A study of the religious ideas of western civilization. The ancient, medieval and modern contribution to current religious thinking and practice.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

RN. 243.—Religion in American Life. 2 hours. 2 credits. Offered 1, 2.

A presentation of the historical development of beliefs and practices of religious groups in the United States.

RN. 251.—Comparative Religion. 3 hours. 3 credits. Offered 1, 2.

The religions of India, China, Japan, the Near East and Europe are compared along general lines. An investigation of Hinduism, Buddhism, Taoism, Confucianism, Shintoism, Mohammedanism, Judaism, and Christianity.

RN. 252.—Comparative Religion. 3 hours. 3 credits. The second half of the course RN. 251-252. Offered 1, 2.

RN. 341.—The Old Testament in the Light of Today. 3 hours. 3 credits. Offered 1.

An inquiry into the literature and history of the Hebrews as reflected in the Bible.

RN. 342.—The Career and Significance of Jesus. 3 hours. 3 credits. Offered 1, 2.

A study of the life of the historical Jesus based upon the comparative texts of the first three gospels and recent Biblical scholarship. A continuation of RN. 341.

RN. 343.—The Life and Work of St. Paul. 3 hours. 3 credits. Offered 2.

A continuation of RN. 342, concerned with the expansion of Christianity in the Roman Empire as disclosed in the literature of the New Testament. Emphasis is placed upon the epistles of Paul, the Book of Acts, and the Johannine writings. Rival philosophies and religions are compared with beliefs of the New Testament authors.

RN. 401.—Advanced Comparative Religion. 3 hours. 3 credits. Offered 1.

A study of the similarities and differences to be found in the sacred books of the East and West. Emphasis will be placed upon the Bhagavad-Gita, the Dhammapada, the Gospel of John, the Tao Teh King and the Prophecy of Isaiah.

RN. 403.—The Social Teaching of Christian Churches. 3 hours. 3 credits. Offered 2.

An investigation of attempts to apply the Christian Ideal of life to the problems of war and peace, state and church, capital and labor, marriage and the family, minorities and the under-privileged.

RN. 405.—The Problems of Religious Philosophy. 3 hours, 3 credits. Offered 1.

An examination of the nature, truth and reasonableness of religious concepts. The problems of man, God, evil, freedom, values and immortality. Attention is given to the relations of common sense, science, philosophy and religion.

RN. 430.—Individual Work. 3 hours. 3 credits. Prerequisite: 12 hours of Upper Division Humanities. Offered 1, 2.

A tutorial program designed to assist the student in writing a comprehensive essay on a topic which involves the correlation of religion with other areas of knowledge.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

RN. 450.—Religious Interpretations of History. 3 hours. 3 credits. Prerequisite: 12 hours of Upper Division Humanities including History. Offered 2.

Recent views of Northrup, Toynbee, Sorokin, and Niebuhr analyzed in the light of Asiatic and Classic conceptions of eternal recurrence, Biblical ideas of Providence, and Western theories of progress and dialectical materialism.

RUSSIAN

Instructional Staff 1956-57

Brunet, J., Head; Segel, H. B.

RSN. 101.—Modern Russian Literature in Translation. 3 hours. 3 credits. No knowledge of Russian required. Offered 2.

Survey of the principal movements in Russian literature in the 19th and 20th Centuries, up to 1917.

RSN. 103.—Masterpieces of Russian Drama Through Gorky. 3 hours. 3 credits. No prerequisite, except, in the case of students of Russian, permission of the department head. Offered 1.

Lectures, readings and reports. Knowledge of Russian not necessary. Students of Russian will, however, be required to do a substantial amount of their reading for the course in Russian.

RSN. 105.—Russian Civilization. 3 hours. 3 credits. No knowledge of Russian required.

The Russian people, their language and civilization, from the beginning to the present.

RSN. 133.—First-Year Russian. 3 hours. 3 credits. Offered 1.

RSN. 134.—First-Year Russian. 3 hours. 3 credits. Prerequisite: RSN. 133, or the equivalent. Conducted in Russian. Offered 2.

RSN. 201.—Second-Year Russian. 3 hours. 3 credits. Prerequisite: RSN. 134, or the equivalent. Conducted in Russian. Offered 1.

RSN. 202.—Second-Year Russian. 3 hours. 3 credits. Prerequisite: RSN. 201, or the equivalent. Conducted in Russian. Offered 2.

RSN. 530.—Individual Work. 3 hours. 3 credits. Prerequisites: 12 hours of college Russian or the equivalent, and permission of the head of the department. Offered 1, 2.

Advanced students may study for credit phases of Russian literature, language and civilization for which there are no special course offerings. With change of content, RSN. 530 may be elected for additional credit in subsequent sessions.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

SCHOOL ART

Instructional Staff 1956-57

Ahrens, M. R., Head; Mitchell, J. O., Schraemeyer, C.

SCA. 253.—Introduction to Art Education. 3 hours. 3 credits. Offered 1, 2, 3.

This course satisfies the requirement for certification in the Elementary School Course, Area V. Also open to secondary education majors. General survey and practice in all types of art work.

SCA. 301.—Creative School Art. 3 hours. 3 credits. Primarily for the in-service teacher. Open only to Upper Division and graduate students. Offered 1, 2, 3.

Study and practice in types of creative art work suitable for children of different age levels. Emphasis will be on painting.

SCA. 333.—Planning the Art Curriculum. 3 hours. 3 credits. Offered 1, 2, 3.

Primarily for in-service teachers. Open only to Upper Division and graduate students. A study of all valuable types of school art expression based on an understanding of child development and needs at each age level. Experiences with many types of art media will be provided.

SCA. 334.—School Art Design. 3 hours. 3 credits. Offered 1, 2, 3.

Primarily for in-service teachers. Open only to Upper Division and graduate students. Study of the fundamentals of design with application to design problems. Use of inexpensive media suitable for use with children of various age levels. Helpful to camp counselors.

SOCIAL STUDIES

Instructional Staff 1956-57

Ahrens, M. R., Head; Drayton, S., Haimbach, D., Hilliard, P., Tison, J. P.

SCL. 301.—Social Studies in the Elementary School. 3 hours. 3 credits. This course satisfies the requirement for certification in the Elementary School Course, Area III. Offered 1, 2, 3.

Study of the selection, organization, planning, developing, and evaluating of experiences which help children become better citizens in a democracy. Exploration of the role of social studies and of other opportunities in the school curriculum for developing needed social learnings. Study of methods and materials.

SCL. 302.—Social Studies in the Elementary School. 3 hours. 3 credits. This course satisfies the certification requirement in the Elementary School Course, Area III. Offered 1, 2, 3.

Examination of content in the social studies field needed for the instruction of elementary children. Relationship of content in the field to the objectives of the elementary school. Recommended for undergraduate students only.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

SOCIOLOGY

Instructional Staff 1956-57

Maclachlan, J. M., Head; Atchley, M. H.; Brown, J. C.; Ehrmann, W. W.; Goggin, J. M.; Granberry, J. M.; Grigsby, S. E.; Quackenbush, O. F.; Rion, W. E.; Smith, T. L.; Webber, I. L.

All sociology majors are ordinarily required to take SY. 201, SY. 541, and SY. 547. SY. 551 is recommended for those who intend to take graduate work in sociology, and for graduate minors in sociology.

SY. 201.—Sociological Foundations of Modern Life. 3 hours. 3 credits. Prerequisite: C-11 or equivalent. Offered 1, 2.

Culture and its relations to specific social problems. The social institutions of American life today in relation to population changes, ethnic groups, and major problems of social policy. The social consequences of technological change. Techniques of social control in the metropolitan world.

SY. 202.—Problems of American Society. 3 hours. 3 credits. Prerequisite: SY. 201. Offered 1.

Major problems of individuals, families, and the communities. Juvenile delinquency, adult maladjustment, pathological migration, dependency and poverty. Social forces, tending to disorganize basic groups. Remedial programs.

SY. 203.—The Field of Social Work. 3 hours. 3 credits. Prerequisite: SY. 201. Offered 1.

Factors influencing the growth and development of social work. Application of sociological principles to social work activities. The variety of social work activities on the local, state and national levels. Major trends in the social work areas. Field visits to welfare agencies in Florida.

SY. 244.—Marriage and the Family. 3 hours. 3 credits. Prerequisite: C-11 or equivalent. Offered 1, 2.

Forms of marriage and the family. Sex developmental differentiations. Sex education. Social relationships between men and women. Preparation for marriage. Legal and social factors affecting marital adjustment.

SY. 305.—(Identical with PSY. 305.)—Society and the Individual. 2 hours. 2 credits. Prerequisite: SY. 201. Offered 1.

The individual in the social structure. Conflicts of individual and societal needs. The individual as the agent of social change. The role of the individual in cultural transmission, diffusion and invention.

SY. 317.—Methods in Social Work. 2 hours, and 3 hours field work. 3 credits. Prerequisite: SY. 203 or permission of instructor. Offered 2.

Methods and administrative techniques relating to social case work, social group work, social administration, and social research. Supervised field work in recognized public and private welfare agencies to tie together academic training and practical field activities.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

SY. 321.—Rural Sociology. 3 hours. 3 credits. Prerequisite: SY. 201. Offered 1.

American rural life in the changing regions. Trends in rural social resources and problems in the United States, the Southeast, Florida.

SY. 322.—The Child in American Society. 3 hours. 3 credits. Prerequisite: SY. 201. Offered 1.

Cultural factors affecting social adjustment of children with emphasis on normal youth. Specialized services to children in and outside their own homes. Current provisions for foster home care, guardianship, adoptions, and institutional care of dependent children.

SY. 326.—Urban Sociology. 3 hours. 3 credits. Prerequisite: SY. 201 or GPY. 204. Offered 2.

The recent dominance of the city in American life. The social institutions in metropolitan culture. The city as the center of social change. Sociological problems and principles involved in city planning.

SY. 343.—The American Negro. 3 hours. 3 credits. Prerequisite: SY. 201. Offered 2.

Major aspects of racial problems in the United States. The cultural development of the American Negro. Patterns and problems of interracial adjustment today.

SY. 348.—Community Organization. 3 hours. 3 credits. Prerequisite: SY. 201. Offered 2.

A study of community structures, activities, problems, and resources. Special attention will be devoted to the problems of community organization in Florida and the Southeast.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

SY. 525.—Juvenile Delinquency. 3 hours. 3 credits. Prerequisite: 6 hours of sociology, including SY. 201. Offered 2.

Social determinants of delinquency. Methods of detention, probation and parole, court administration. Designed for teachers, social workers, and others concerned with the practical problems of delinquency.

SY. 530.—Individual Work. 3 hours. 3 credits. Prerequisite: 12 hours of sociology, including SY. 201. Offered 1, 2.

Designed to permit advanced students to do work in subjects not available to them in currently offered courses.

SY. 541.—History of Sociological Thought. 3 hours. 3 credits. Prerequisite: 6 hours of sociology, including SY. 201.

The development of sociological thought. Sociological elements in ancient and medieval thought and sociological theories in the renaissance and the early modern period.

SY. 545.—The American Family. 3 hours. 3 credits. Prerequisite: 6 hours of sociology, including SY. 201. Offered 2.

The cultural configuration of the American family. Basic relationships will be examined in terms of theoretical, historical, and clinical considerations.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

SY. 546.—Criminology. 3 hours. 3 credits. Prerequisite: SY. 201. Offered 1, 2.

Nature and causes of crime. Punishment, treatment, prevention of criminality. Sociological aspects of criminal law and procedure. Emphasis on current trends in criminality and its treatment.

SY. 547.—Social Research and Investigation. 3 hours. 3 credits. Prerequisite: 6 hours of sociology, including SY. 201. Offered 2.

Current methods of research in sociology. Trends in methodology and research interests here and abroad. Historical development of research methods.

SY. 550.—Population and Public Affairs. 3 hours. 3 credits. Prerequisite: 6 hours of sociology, including SY. 201. Offered 1.

Social effects of population characteristics in the modern world. The problems created by recent rapid population changes in the United States. Methods of studying population trends and situations.

SY. 551.—Comparative Sociology. 3 hours. 3 credits. Prerequisites: SY. 201 and SY. 541, or equivalent. Offered 2.

Twentieth century sociology in Europe and in the Americas, with intensive study of one or more major systematic sociologists.

SY. 552.—American Culture Today. 3 hours. 3 credits. Prerequisite: 6 hours of sociology, including SY. 201.

Regional patterns in American culture. Cultural factors affecting basic problems of American life. Regional differentials in population, technology, and the social institutions.

SY. 555.—Industrial Sociology. 3 hours. 3 credits. Prerequisites: SY. 201 or BS. 473 plus any one of the following: PSY. 206, ES. 210, ES. 372, BS. 373, BS. 472 or SY. 326.

A study of human relations in industry from the standpoint of the sociological factors involved; the development, characteristics and implied assumptions of modern industrial society, social role of workers, technicians, management, and owners; formal and informal groups; factories as social organizations; industrial communities; incentives, and leadership.

SY. 564.—Peoples, Cultures and Social Institutions of Spanish America. 3 hours. 3 credits. Prerequisite: 6 hours of sociology, including SY. 201. Offered 1.

Sociological processes in Spanish America. The racial, ethnic and cultural elements and their fusion. Characteristics and trends of Spanish American population. Land settlement patterns, the structure and functioning of the social institutions.

SY. 565.—Peoples, Cultures, and Social Institutions of Brazil. 3 hours. 3 credits. Prerequisite: 6 hours of sociology, including SY. 201. Offered 2.

Modern social trends in Brazil. Cultural, racial and ethnic groups in the development of Brazilian culture. Population trends and pressures, the relations of the people to the land, the structure and functioning of the social institutions.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

SY. 590.—The South Today. 3 hours. 3 credits. Prerequisite: 6 hours of sociology, including SY. 201. Offered 2.

Social resources and challenges in the modern Southeast. Variant patterns of southern culture. Population pressures and trends. The major problems of southern social institutions. Programs and plans for the region.

SY. 591.—Masterpieces in the Social Sciences. 3 hours. 3 credits. Prerequisites: Senior standing and a major in one of the social sciences. Identical with HY. 591, ES. 591, and PCL. 591. Offered 1.

A reading course for advanced undergraduate students. Enrollment limited to students having the approval of their advisor in the major field and the course chairman. Selected works of representative authors who have contributed most to the fields of economics, history, sociology, political science, geography, and anthropology will be read and evaluated.

SY. 592.—Masterpieces in the Social Sciences. 3 hours. 3 credits. Prerequisites: Senior standing and a major in one of the social sciences. Identical with HY. 592, ES. 592, and PCL. 592. Offered 2. The second half of the course SY. 591-592.

GRADUATE COURSES

Each student registered as a graduate major in sociology will be required to pass a qualifying examination, given by his supervisory committee usually during the first semester as a sociology major.

No graduate major may be completed without adequate credits at the 600 level.

SY. 619.—Advanced Study of Rural Society. 3 hours. 3 credits.

The rural life of modern man. Readings and supervised research with emphasis on rural life in the United States, the Southeast and Florida.

SY. 620.—Advanced Urban Sociology. 3 hours. 3 credits.

Readings, reports and supervised research in the field of urban sociology. Emphasis upon techniques of analyzing problems and trends in urban life, the social aspects of city planning and administration, the pathologies of city life.

SY. 621.—The Sociology of the Aged. 3 hours. 3 credits.

The aged in primitive culture. Historical background of problems of the aged. Characteristics of older people in Western European and American societies. Physical, psychological, and social aspects of the aging process. Personal adjustment to roles and statuses of later maturity. Societal adjustment to the aged group.

SY. 622.—Seminar: Rural Social Organization. 3 hours. 3 credits.

The structure of rural society. The social relationships between man and the land. Farm family, neighborhood and community patterns. Differentiation and stratification in rural society. The structure and functions of rural institutions.

SY. 625.—Seminar in the Study of Marriage and the Family. 3 hours. 3 credits. Offered 1.

A critical analysis of the classical systematic treatises and of the more significant research studies in the field. Construction and completion of short research projects by the student.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

SY. 630.—Individual Work. 3 hours. 3 credits. Offered 1, 2.

Designed to permit graduate students to do work in subjects not available to them in currently offered courses.

SY. 631.—The Development of Social Thought. 3 hours. 3 credits.

Advanced study in the field of social theory. Each student will be required to make a detailed study of one major theorist and one school of thought. Seminar reports and research papers will deal with major problems of social theory.

SY. 646.—Seminar in Population. 3 hours. 3 credits. Prerequisite: SY. 550. Offered 2.

Readings, seminar reports and supervised research in population. Emphasis on studies of research techniques and on population trends in the United States.

SY. 649.—Population Analysis. 3 hours. 3 credits. Prerequisite: SY. 646.

Supervised completion of readings in techniques of population research. Supervised research projects using primary data, exploring both demographic and larithmic problems. Not open to undergraduates.

SY. 651.—Seminar in American Culture. 3 hours. 3 credits.

The background literature of regional sociology. Hobhouse, LePlay, Mukerjee, Odum, Sorokin, Vance, and others. Readings and seminar reports on selected aspects of contemporary American culture.

SY. 654.—Seminar in Spanish American Cultures. 3 hours. 3 credits.

Intensive study of the peoples and cultures of Spanish American countries.

SY. 655.—Seminar in Brazilian Culture. 3 hours. 3 credits.

The peoples and institutions of Brazilian life today. Not open to undergraduates.

SY. 670.—Social Research Methods. 3 hours. 3 credits. Offered 1.

Advanced studies in the literature of methodology. Emphasis upon statistical, sociometric and experimental methods.

SY. 680.—Seminar in the American South. 3 hours. 3 credits.

Readings, seminar reports and supervised research in the culture and problems of the Southeastern states.

SY. 682.—Seminar in Criminology. 3 hours. 3 credits. Offered 2.

Readings and seminar reports, with research assignments, in the fields of penology, criminology and sociological jurisprudence. Designed for advanced students interested in criminology and in research in the fields of probation, parole and prison administration.

SY. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2.

SY. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2.

For students who are working for a doctor's degree in the area of Inter-American Studies.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

SOILS

Instructional Staff 1956-57

Smith, F. B., Head; Blue, W. G., Breland, H., Caldwell ,R. E., Edson, S. N., Eno, C. F., Fiskel, J. G. A., Gammon, N., Jr., Hammond, L. C., Neller, J. R., Pritchett, W. L., Robertson, W. K., Rothwell, D. F., Spinks, D. O., Thornton, G. D., Volk, G. M.

SLS. 300.—Forest Soils. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite: CY. 109-110 or CY. 121-122. Open only to forestry students. Offered 1.

The nature and properties of forest soils. The fundamentals of soil science with applications of the science of forestry. Subjects include soil genesis, morphology, classification, fertility, chemistry, microbiology, physics and moisture relationships.

SLS. 301.—Soils. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite: CY. 109-110 or CY. 121-122. Offered 1, 2, 3.

The nature and properties of soils. A treatment of the fundamentals of soil science including genesis, morphology, classification, chemistry, biology, physics and moisture relationships as related to plant growth.

SLS. 302.—Soil Fertility. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite: SLS. 301. Offered 1, 2, 3.

General principles of soil fertility. The physical, chemical and biological factors affecting soil fertility and crop production. Studies on samples of soil from the home farm, commercial fertilizers, manures, green manures and organic matter maintenance, crop rotations and permanent soil fertility.

SLS. 303.—Introductory Economic Nematology. Identical with EY. 303, PT. 303, and VY. 303. 2 hours, and 2 hours laboratory. 3 credits. Prerequisites: C-61 and BLY. 161, or BTY. 101-102. Offered 1. (For description see EY. 303).

SLS. 400.—Tropical Soils. 2 hours. 2 credits. Prerequisite: SLS. 302. Offered 1.

The nature and properties of tropical soils; their genesis, morphology, classification, fertility, conservation and utilization. A comprehensive study of the literature on tropical soil management.

SLS. 401.—Soil Morphology and Classification. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite: SLS. 301. Offered 1.

Soil genesis, morphology and classification of the important soils of Florida and of the United States in relation to their proper management as land surface units.

SLS. 402.—Advanced Soil Fertility. 2 hours, and 2 hours laboratory. 3 credits. Prerequisites: SLS. 302 and CY. 123. Desirable prerequisite: CY. 331. Offered 1, 2.

Soil and plant relationships especially from the standpoint of normal growth under field conditions. Composition and properties of soils in relation to plant nutrition. The fundamental relationships of factors affecting plant growth including water and air supply, microbial activity and organic matter, soil colloids, cation exchange, acidity and liming, and supply of plant nutrients.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

SLS. 404.—Soil Surveying. 2 hours, and 4 hours laboratory. 4 credits. Prerequisite: SLS. 301. Offered 2.

Methods of the soil survey, soil maps and survey reports. Sampling the soil profile and studying soil type characteristics. Detailed survey and mapping of an assigned area. Comprehensive study of Florida's soils.

SLS. 405.—Soil Microbiology. 2 hours, and 2 hours laboratory. 3 credits. Prerequisites or corequisites: SLS. 302 and BCY. 300. Offered 1.

Occurrence and activities of soil microorganisms and their influence on soil fertility.

SLS. 406.—Soils and Fertilizers. 2 hours, and 2 hours laboratory. 3 credits. Prerequisite: SLS. 302. Offered 1, 2.

The use of commercial fertilizers with reference to their effects on soils, methods of application and crop response. Manufacture and formulation of commercial fertilizers. Laboratory will include a visit to a fertilizer plant where the student will observe commercial practices in mixing and handling.

SLS. 408.—Soil and Water Conservation. Identical with AG. 408. 2 hours, and 2 hours laboratory. 3 credits. Prerequisites: SLS. 301, AG. 301. Prerequisite or corequisite: SLS. 302. Offered 2.

The social and economic aspects of soil deterioration. Principles involved in soil conservation, and methods of control as applied to Florida will be carefully developed. Given jointly with the Department of Agricultural Engineering.

SLS. 420.—Special Problems in Soils. 2 to 6 hours. 1 to 3 credits. With permission of the instructor. Offered 1, 2.

Research problems in soils for qualified students in all departments of College of Agriculture.

GRADUATE COURSES

The fields of graduate work offered in Soils are Soil Fertility, Soil Chemistry, Soil Microbiology, and Soil Physics. The interests of the student and the facilities available determine the field for the thesis problem. The field in which the student presents his dissertation shall be his major field. However, all Ph.D. candidates shall be expected to qualify in the four major fields named above.

Prerequisites: A student who expects to do graduate work in the Department of Soils should present the bachelor's degree from a recognized College of Agriculture, with a major in Soils, or the equivalent in other sciences and should include at least a one-semester course in each of the following: Soil Morphology and Classification, General Soils, Soil Fertility, Soils and Fertilizers, General Bacteriology, General Botany, Plant Physiology, General Field Crops, General Inorganic Chemistry, Qualitative Analysis, and Agricultural Bio-organic Chemistry. This would ordinarily mean at least twenty hours, or its equivalent, of undergraduate work in the department, and those not meeting the above requirements will be required to make up any deficiency early in their graduate work. The student will be held responsible for such basic undergraduate courses as are deemed necessary for the pursuit of his special project.

SLS. 600.—Advanced Soils. 1 to 3 credits. Prerequisites: At least one course in Soils and approval of the head of the department. Offered 1, 2.

Conferences, lectures, laboratory and problems in Soil Fertility and Management, Soil Chemistry and Microbiology, Soil Physics and Surveying and General Soils.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

SLS. 601.—Advanced Soil Microbiology. 1 hour, and 6 hours laboratory. 3 credits. Prerequisite: SLS. 405. Offered 2.

Qualitative, quantitative and functional studies of the soil microflora under field and laboratory conditions on both mineral and organic soils, including virgin soils, in relation to type, conditions of cultivation and fertility; elemental metabolism of the more important organisms, especially in terms of minor elements; climatic influences.

SLS. 602.—Soil Chemistry. 3 hours, and 3 hours laboratory. 4 credits. Prerequisites: SLS. 402, CY. 331, CY. 317, PS. 110. Desirable, but not required preparatory courses are: PS. 201-202 instead of PS. 110 and CY. 401-402 instead of CY. 317. Offered 1.

The chemical constituents of soils and their reactions, in relation to soil fertility problems; base exchange reactions as they affect soil acidity, lime requirements, and the fate of applied fertilizers; physico-chemical conditions in soils; minor elements; factors affecting leaching losses and fixation; laboratory practice in soil analysis with special emphasis on pH technique.

SLS. 603.—Soil Physics. 2 hours, and 3 hours laboratory. 3 credits. Prerequisites: SLS. 301 and PS. 110. Offered 2, 1955-56 and alternate years thereafter.

Physical properties of the soil and their relation to the chemical reactions and biological functions in the soil; water and air movement. Mechanical analysis, moisture relationships and other physical studies are made of Florida soils. Instruction in the use of physical appliances in the field of soils.

SLS. 604.—Soil Fertility. 3 hours. 3 credits. Prerequisites: SLS. 402 and BTY. 411. Offered 2, 1954-55 and alternate years thereafter.

Fundamental soil fertility problems with emphasis on current theories and research in the field of soil fertility. Nutrient availability and absorption and soil factors affecting it. Crop response and the fertilizer requirement. Soil fertility diagnosis.

SLS. 605.—Laboratory Methods of Soil Fertility Investigation. 3 to 9 hours. 1 to 3 credits. Prerequisites: SLS. 402, and CY. 331. Offered 1, 2, 3.

Analytical procedures, and experimental methods required in study of soils from the standpoint of fertility, availability of nutrients for crop growth, reaction of soils with fertilizers and other soil amendments and biological assay of soils.

SLS. 606.—Preparation of Fertilizers and Their Utilization. 2 hours. 2 credits. Prerequisites: CY. 317 and SLS. 406. Offered 2.

Physical and chemical properties of fertilizer materials; processes, principles, and reactions involved in the use of fertilizers; properties controlling limits and compatibility of fertilizer materials; reaction of fertilizers with soils; and interactions of mineral elements in soils.

SLS. 611.—Genesis, Morphology and Classification of World Soils. 2 hours. 2 credits. Prerequisite: SLS. 401. Offered 2, 1954-55 and alternate years thereafter.

Developmental factors, morphological characteristics, systems of classification and geographical distribution of world soils.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

SLS. 650.—Conference in Soils. 1 hour recitation per credit. 1 to 4 credits. Offered 1, 2.

Reports and discussions of published research in the following fields:

A. Soil Physics
B. Soil Chemistry
C. Soil Microbiology
D. Soil Fertility

SLS. 670.—Research in Soils. 1 to 6 credits. Offered 1, 2, 3.

SLS. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2, 3.

SLS. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2, 3.

SPANISH

Instructional Staff 1956-57

Brunet, J., Head; Fernandez, P. V., Hayes, F. C., Marchand, H., Ramirez, A., Wershow, I. R.

The undergraduate major must include SH. 305-306, SH. 307-308 and SH. 501-502, or the equivalent. In addition, it must also include, as a subsidiary requirement, FLE. 351, FLE. 352 and six semester hours of one or more foreign languages other than the major.

SH. 133.—First-Year Spanish. 5 hours lecture and laboratory. 3 credits. Offered 1, 2.

SH. 134.—First-Year Spanish. 5 hours lecture and laboratory. 3 credits. Prerequisite: SH. 133, or the equivalent. Offered 1, 2.

SH. 201.—Second-Year Spanish. 5 hours lecture and laboratory. 3 credits. Prerequisite: SH. 134, or the equivalent. Conducted in Spanish. Offered 1, 2.

SH. 202.—Second-Year Spanish. 5 hours lecture and laboratory. 3 credits. Prerequisite: SH. 201, or the equivalent. Conducted in Spanish. Offered 1, 2.

SH. 225.—Commercial Spanish. 3 hours. 3 credits. Prerequisite: SH. 202, or the equivalent. Conducted in Spanish.

SH. 305.—Composition and Conversation. 3 hours. 3 credits. Prerequisite: SH. 202, or the equivalent. Conducted in Spanish. Offered 1.

SH. 306.—Composition and Conversation. 3 hours. 3 credits. Prerequisite: SH. 202, or the equivalent. Conducted in Spanish. Offered 2.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

SH. 307.—Introductory Readings in Spanish Literature and Civilization. 3 hours. 3 credits. Prerequisite: SH. 202, or the equivalent. Conducted in Spanish. Offered 1.

SH. 308.—Introductory Readings in Spanish Literature and Civilization. 3 hours. 3 credits. Prerequisite: SH. 202, or the equivalent. Conducted in Spanish. Offered 2.

SH. 351.—Introductory Readings in Spanish-American Literature and Civilization. 3 hours. 3 credits. Prerequisite: SH. 307-308, or the equivalent.

SH. 352.—Introductory Readings in Spanish-American Literature and Civilization. 3 hours. 3 credits. Prerequisite: SH. 307-308, or the equivalent.

SH. 430.—Individual Work. 3 hours. 3 credits. Prerequisites: 18 hours of college Spanish or the equivalent, and permission of the department head.

Readings, conferences and reports. Advanced students may study subjects in Spanish literature, language and civilization for which there are no special course offerings. With change of content, SH. 430 may be elected for additional credit in subsequent sessions.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

SH. 501.—The 19th Century Spanish Novel. 3 hours. 3 credits. Prerequisites: SH. 305-306, and SH. 307-308, or the equivalent. Conducted in Spanish. Offered 1.

SH. 502.—Spanish Drama Since 1800. 3 hours. 3 credits. Prerequisites: SH. 305-306, and SH. 307-308, or the equivalent. Conducted in Spanish. Offered 2.

SH. 533.—Problems of Teaching: Phonetics. 3 hours. 3 credits. Prerequisites: SH. 305-306, SH. 307-308 and SH. 501-502, or the equivalent.

Summary and evaluation of materials and methods of teaching pronunciation, followed by a descriptive analysis of the phonetics of Spanish and advanced conversational practice. The course is especially designed for teachers but is valuable also to majors and others requiring advanced training.

SH. 534.—Problems of Teaching: Grammar. 3 hours. 3 credits. Prerequisites: SH. 305-306, SH. 307-308 and SH. 501-502, or the equivalent.

Summary and evaluation of materials and methods of teaching language, followed by explanation of phases of grammar that confront the teacher with special problems. Advanced composition. The course is especially designed for teachers, but is of value also to majors and others requiring advanced training.

SH. 535.—Lope de Vega and Contemporaries. 3 hours. 3 credits. Prerequisites: SH. 305-306, SH. 307-308 and SH. 501-502, or the equivalent. Conducted in Spanish.

SH. 536.—Calderon and Contemporaries. 3 hours. 3 credits. Prerequisites: SH. 305-306, SH. 307-308 and SH. 501-502, or the equivalent. Conducted in Spanish.

The statement "Offered 1" means offered first semester; 2. second semester; 3, summer session.

SH. 537.—Cervantes and His Age. 3 hours. 3 credits. Prerequisites: SH. 305-306, SH. 307-308 and SH. 501-502, or the equivalent. Conducted in Spanish.

SH. 538.—Cervantes and His Age. 3 hours. 3 credits. Prerequisites: SH. 305-306, SH. 307-308 and SH. 501-502, or the equivalent. Conducted in Spanish.

SH. 544.—Lyric Poetry. 3 hours. 3 credits. Prerequisite: three years of college Spanish or the equivalent. Conducted in Spanish.

COURSES FOR GRADUATES

Prerequisite: Thirty semester hours of undergraduate courses in Spanish, which must include SH. 305-306, SH. 307-308 and SH. 501-502, or the equivalent. In addition, a reading knowledge of a foreign language other than Spanish is required.

SH. 601.—Spanish Historical Grammar. 3 hours. 3 credits. Prerequisite: Two years of Latin.

The phonology, morphology and syntax of Old Spanish.

SH. 602.—The Old Spanish Literature. 3 hours. 3 credits. Prerequisite: SH. 601.

SH. 604.—The Spanish Picaresque Novel. 3 hours. 3 credits.

SH. 606.—Contemporary Drama. 3 hours. 3 credits.

SH. 607.—Contemporary Novel. 3 hours. 3 credits.

SH. 616.—Spanish Essayists of the Nineteenth Century. 3 hours. 3 credits.

SH. 630.—Individual Work. 3 hours. 3 credits. Offered 1, 2.

Readings, conferences and reports. A student may study any 500 course in Spanish not currently scheduled. With change of content, SH. 630 may be elected for additional credit in subsequent sessions.

SH. 650.—Special Study in Spanish-American Literature. 3 hours. 3 credits.

The study of types of literature and literary movements in Spanish-speaking America. Each time the course is offered, it is announced in the schedule of courses with a specific subject, such as one of the following: Colonial Literature of Spanish-America; Romantic Movement in Spanish-America; The Spanish-American Short Story and Essay; The Spanish-American Novel; Spanish-American Poetry; Contemporary Spanish-American Literature.

SH. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2.

SH. 799.—Research and Doctoral Dissertations. 1 to 12 credits. Offered 1, 2.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session

SPEECH

Instructional Staff 1956-57

Constans, H. P., Head; Ashby, C., Beech, J., Buck, M. W., Crist, R. I., Dickey, D. C., Ehninger, D. W., Hale, L. L., Kurtzrock, G. H., Mase, D. J., McClellan, M. C., Miles, J. E., Parrish, W. M., Sarett, A. J., Tew, R. E., Van Meter, J. E., Zimmerman, L.L.

SCH. 100.—Parliamentary Procedure. 1 hour. 1 credit. Offered 1, 2.

Rules governing the proceedings of deliberative assemblies together with practice in their usage.

SCH. 200.—Voice and Diction. 2 hours. 2 credits. Offered 1, 2.

Effective voice production, clear articulation, acceptable pronunication, and pleasing intonation; rhythm and phrasing. Both group and individual improvement needs are met.

SCH. 201.—Effective Speaking. 3 hours. 3 credits. Offered 1, 2.

Designed to aid the student through demonstration and practice to speak effectively to a group.

SCH. 250.—Acting. 3 hours. 3 credits. Prerequisite or corequisite: SCH. 201. Offered 1, 2.

A study of acting from the aesthetic and practical viewpoints with emphasis on theories of acting and principles of stage make-up.

SCH. 301.—Advanced Public Speaking. 3 hours. 3 credits. Prerequisite: SCH. 201. Offered 1, 2.

Structure, style and delivery of speeches for formal occasions, with special emphasis on the psychology of audience persuasion.

SCH. 303.—Argumentation. 3 hours. 3 credits. Prerequisite or corequisite: SCH. 201. Offered 1.

The principles of argumentation and their application to issues of current public interest. Analysis, evidence, inference, and refutation. Extensive practice in various forms of debate.

SCH. 307.—Interpretation of Literature. 3 hours. 3 credits. Prerequisite: or corequisite: SCH. 201. Offered 1, 2.

Exercises for developing the effectiveness of the body and voice; oral reading of short stories and narrative poetry.

SCH. 308.—Interpretation of Literature. 3 hours. 3 credits. Prerequisite: SCH. 307. Offered 2.

Advanced oral interpretation of lyric poetry, dialect readings, novels, plays; arrangement and presentation of public programs.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

SCH. 309.—Staging and Lighting. 2 hours, and 4 hours laboratory. 3 credits. Prerequisite: SCH. 250. Offered 1, 2.

The designing, constructing, assembling and painting of scenery; lighting plans, instruments, controls and colors; special effects. Participation in plays.

SCH. 310.—Directing. 2 hours, and 2 hours laboratory. 3 credits. Prerequisites: SCH. 250 and SCH. 309. Offered 2.

The theories and principles of direction and practical experience in directing plays. The project method is used.

SCH. 314.—Types of Public Discussion. 3 hours. 3 credits. Prerequisite: SCH. 201. Offered 1, 2.

Study and practice in the principles and methods of group discussion. Special attention given to problem-solving and conflict resolution.

SCH. 317.—Correction of Speech Defects. 3 hours. 3 credits. Prerequisite: SCH. 201. Offered 1, 2.

A beginning course in the recognition of common defects of articulation, dialect, nasality. Observation in the clinic.

SCH. 320.—Speech Training in Elementary Schools. 3 hours. 3 credits. Prerequisite: SCH. 201 or experience as an elementary teacher. Offered 1, 2.

Group procedures for the development of desirable speech habits in the child. Recognition of speech disorders.

SCH. 333.—One-Act Play. 3 hours. 3 credits. Prerequisite: SCH. 201. Offered 1.

The one-act play as a type of drama; the reading and criticism of the best one-act plays by contemporary writers.

SCH. 410.—Scientific Bases of Speech. 3 hours. 3 credits. Prerequisite: SCH. 317. Offered 1.

A survey in certain fields of the scientific material which is fundamental to an understanding of the normal speaking process and of speech abnormalities.

SCH. 415.—Applied Phonetics. 3 hours. 3 credits. Prerequisite: SCH. 201. Offered 1, 2.

An elementary phonetic analysis of the sounds of speech symbolization, with practice in broad transcription. Application to specific areas of speech.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

SCH. 501.—History of the Theatre (From its Beginning to 1642). 3 hours. 3 credits. Prerequisite: SCH. 309 or SCH. 310. Offered 1.

Development of the theatre from its beginning, with emphasis on the physical structure, production problems and theatrical personalities.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

SCH. 502.—History of the Theatre (From 1642 to the Present). 3 hours. 3 credits. Prerequisite: SCH. 309 or SCH. 310. Offered 2.

The theatre from the middle of the 17th century in Europe and America. Critical examination of the physical theatre, dramatic productions, and theatrical personalities of the 19th and early 20th century.

SCH. 504.—Advanced Stagecraft and Design. 1 hour, and 4 hours laboratory. 3 credits. Prerequisite: SCH. 309. Offered 2.

A course for advanced undergraduates and graduates covering the design and lighting of scenery; an analysis of the styles of design, drawing techniques, with practice in lighting control and operation, and laboratory work in scene design.

SCH. 508.—Advanced Forms of Public Address. 3 hours. 3 credits. Open to seniors who have completed SCH. 301 and 303, or 314. Prerequisite: Permission of Department Head. Offered 2.

Audience psychology—attitudes, drives, motives—and its application to speaking situations as a means of social control; special techniques of speech construction.

SCH. 518.—Speech Pathology. 3 hours. 3 credits. Prerequisites: SCH. 317, 410, 415. Offered 2.

The diagnostic and corrective procedure in disorders of speech; paralyses, cleft palate and associated oral anomalies, pitch and quality problems, delayed speech.

SCH. 519.—Speech and Hearing. 3 hours. 3 credits. Prerequisite: SCH. 415. Offered 1.

A study of the relationship between speech and hearing, the frequency of hearing losses and speech defects, the speech therapies for the hearing handicapped; elementary audiometry.

SCH. 522.—Speech Reading. 3 hours. 3 credits. Prerequisite: SCH. 519. Offered 2.

Methods, materials, and aids needed for teaching speech (lip) reading to children and adults.

SCH. 531.—The Teaching of Speech. 3 hours. 3 credits. Open to seniors who have completed 12 semester hours of speech courses numbered 300 or above. Offered 1.

The more important philosophies and systems of speech instruction of the past 100 years. Instruction, organization, and content of the basic and advanced courses in the speech curriculum.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

GRADUATE COURSES

Prerequisite: A student must have an undergraduate major in speech or its equivalent.

The courses listed below may be taken to complement or fulfill the course requirements for the M.A. and Ph.D. degrees.

SCH. 600.—Introduction to Graduate Study. 3 hours. 3 credits. Required of all graduate students majoring in speech. Offered 1.

The various areas of the field of speech with a review of the literature.

SCH. 601.—Playwriting. 3 hours. 3 credits.

The theory and practice of playwriting with emphasis on the creative and practical elements—attention to writing the regional play.

SCH. 602.—Plays, Players, and Playwrights. 3 hours. 3 credits.

A study of recent plays primarily from the point of view of production; the techniques of outstanding actors and playwrights.

SCH. 603.—Problems in Technical Production. 3 hours. 3 credits. Offered 1.

The theory and problems of the technical aspects of the production of plays. Participation in a supervisory capacity in a selected technical phase of a major theatre production.

SCH. 604.—Problems in Directing. 3 hours. 3 credits. Offered 2.

The problems of the play director; selecting, casting, rehearsing and mounting the play. Participation in directing and producing plays.

SCH. 605.—Seminar in American Oratory. 3 hours. 3 credits. Offered 1.

Studies of the lives and speeches of noted American speakers with special reference to the changing character of compositional style and delivery.

SCH. 606.—Seminar in British Oratory. 3 hours. 3 credits. Offered 2.

Studies of the lives and speeches of noted British speakers with special attention to the changing character of compositional style and delivery.

SCH. 607.—Ancient and Medieval Rhetoric. 3 hours. 3 credits. Offered 1.

The history of rhetorical theory; a study of certain great works in order to provide understanding of the points of view of outstanding classical writers who have influenced rhetorical thought, criticism, speaking and writing

SCH. 608.—English and American Rhetoric. 3 hours. 3 credits. Offered 2.

This course follows SCH. 607. Ancient and Medieval Rhetoric, and emphasizes the rhetorical theory of Continental, English and American writings.

SCH. 609.—Contemporary Rhetoric. 3 hours. 3 credits.

A survey of certain major trends in contemporary rhetorical thought, with special reference to their sources and pedagogical implications.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

SCH. 611.—Seminar in Hearing. 3 hours. 3 credits. Offered 2.

Normal and abnormal hearing function; methods of testing hearing; evaluation of hearing aids; speech reading techniques. Clinical practice.

SCH. 612.—Seminar in Stuttering. 3 hours. 3 credits. Offered 2.

An impartial presentation of the theories of the cause of stuttering and suggested therapies.

SCH. 613.—Southern Oratory. 3 hours. 3 credits.

The speaking and speeches of selected Southern speakers studied from the standpoints of the speaker, the speech situation, the period, and the speeches; a synthesis and interpretation of Southern speakers and their influence on the South.

SCH. 615.—Advanced Phonetics. 3 hours. 3 credits. Offered 2.

The use of phonetics as a research tool in the study of American and foreign dialects, colloquialism; phonetic theory. Considerable practice in narrow phonetic transcription.

SCH. 616.—Seminar in Speech Research. 3 hours. 3 credits. Prerequisite: Permission of Department Head. Offered 2.

A lecture and project course in the more complex problems in speech.

SCH. 617.—Seminar in Speech Pathology. 3 hours. 3 credits. Offered 1.

A study of the speech involvements in cases of cerebral palsy, aphasia, mental retardation and emotional maladjustment, and the corrective methods of treatment.

SCH. 618.—Seminar in Clinical Administration. 3 hours. 3 credits.

An advanced course in the pathologies of speech, with emphasis on rehabilitative procedures, including the team concept of diagnosis and treatment and other matters pertaining to clinical organization.

SCH. 621.—Clinical Practice. 1 hour seminar, 6 hours clinic laboratory. 3 credits. Offered 1, 2.

Supervised practice in clinical teaching, application of clinical methods in diagnosis, and re-training of individuals having disorders of speech. Preparation and study of case histories.

SCH. 622.—Clinical Practice. 1 hour seminar, 6 hours clinic laboratory. 3 credits. Offered 1, 2. A continuation of SCH. 621.

SCH. 623.—(Identical with EDP. 506) Problems of the Deaf and Hard-of-Hearing. 3 hours. 3 credits.

Designed to train the deaf and the hard-of-hearing. Methods and materials used in meeting the problems of the individual and the group of children or adults who have impaired hearing.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

SCH. 626.—Theories of Interpretative Reading. 3 hours. 3 credits. Offered 2.

The psychological and philosophical theories of creative, artistic, oral reading; the teaching of interpretative reading; practice in reading from the works of selected modern authors.

SCH. 630.—Individual Work. 3 hours. 3 credits. Offered 1, 2.

A project or research course in such areas of Speech as are needed by graduate students. May be elected in subsequent sessions with change of content.

SCH. 699.—Research and Master's Thesis. 0 to 6 credits. Offered 1, 2.

SCH. 799.—Research and Doctoral Dissertation. 1 to 12 credits. Offered 1, 2.

VEGETABLE CROPS

Instructional Staff 1956-57

F. S. Jamison, Head; Halsey, L. H., Lorz, A. P., Nettles, V. F., Stout, G. J., Thompson, B. D.

VC. 201.—Principles of Horticulture. 2 hours, and 2 hours laboratory. 3 credits. Desirable corequisite: BTY. 101-102. Required of all vegetable crops majors. Offered 1, 2, 3.

Home and commercial production of fruits, vegetables and flowers. Both for students not expecting to major in horticulture and as an introductory course for vegetable crops majors which should be taken in the sophomore year. Textbook: Schilieter and Richey, *Textbook of General Horticulture.*

VC. 212.—Vegetable Gardening. 2 hours, and 2 hours laboratory. 3 credits. Desirable prerequisite: BTY. 101-102. Offered 2.

Principles and practice of vegetable growing, with special attention to the home garden. An introduction to further work in olericulture. Textbook: Thompson, *Vegetable Crops.*

VC. 405.—Physiology of Herbaceous Crops. 3 hours. 3 credits. Prerequisites or corequisites: BTY. 211, VC. 201. Offered 1.

A study of the physiological principles underlying the production of vegetable and flower crops.

VC. 406.—Handling Techniques and Practices in Marketing. 2 hours, and 2 hours laboratory. 3 credits. Desirable prerequisites: VC. 421-422, BTY. 211, PT. 321. Corequisite: AS. 408. Offered 2.

An introduction to the methods and techniques in the harvesting, grading, packaging, transporting, and marketing of vegetables. Emphasis will be placed on the biological principles involved and the effects of harvesting and handling practices on quality maintenance and control.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

VC. 421.—Commercial Vegetable Crops. 2 hours, and 2 hours laboratory. 3 credits. The first half of VC. 421-422. Prerequisites: VC. 212. Corequisite: SLS. 301. Offered 1.

A thorough study of the principles and practices involved in the successful production of vegetable crops on a commercial scale. In the first half of the course, the vegetable crops industry of the United States is surveyed, and the factors are pointed out which make the success or failure of this enterprise in various parts of the country. A two-day field trip will be required.

VC. 422.—Commercial Vegetable Crops. 2 hours, and 2 hours laboratory. 3 credits. The second half of VC. 421-422. Prerequisite: VC. 421. Offered 2.

In this part of the course attention is confined to Florida and to those cultural practices which have proven especially satisfactory here. Various other problems of the Florida vegetable grower are studied also, such as choice of varieties, frost protection, plant production, harvesting methods, etc. A two-day field trip is required.

GRADUATE COURSES

Prerequisites: Twenty hours of satisfactory work in Horticultural Science of which twelve hours must have been in the area of Vegetable Crops. Additionally the student must have completed satisfactorily ten hours of Botany and basic courses in Entomology, Plant Pathology, and Soils.

Through the cooperation of the Florida Agricultural Experiment Station and its branch stations, it is possible for thesis research to be conducted at these Stations. All thesis research for the Ph.D. will normally be performed at one of these stations .

VC. 603.—Vegetable Crops Seminar. 1 hour. 1 credit. Offered 1, 2.

VC. 615.—Advanced Olericulture. 3 hours. 3 credits. Prerequisites: VC. 422, BTY. 411. Offered 2.

A critical survey of scientific knowledge as related to production of truck crops.

VC. 621.—Techniques of Vegetable Breeding. 2 hours. 2 credits. Prerequisites: AY. 329, VC. 421. Desirable prerequisites: AY. 452, BTY. 306. Offered 1.

A study of the techniques involved in breeding vegetables for horticultural qualities and for resistance to diseases and animal pests, and of the methods of testing new vegetable introductions.

VC. 622.—Vegetable Handling and Market Technology. 2 hours, and 2 hours laboratory. 3 credits. Prerequisites: VC. 421-422, VC. 406, BTY. 211, ACY. 208. Offered 2.

A detailed study of vegetable harvesting, grading, packaging, transporting, and marketing. Emphasis will be placed on the physical, chemical, and biological effects of harvesting and handling practices as each is related to production factors such as environment, disease and insect control, cultural practices, and fertilization in the maintenance and control of quality. Methods of measuring quality as determined by appearance, physical and chemical analyses and transformations will be studied.

The statement "Offered 1" means offered first semester; 2, second semester; 3, summer session.

VC. 670.—Non-thesis Research in Vegetable Crops. 1 to 6 credits. Offered 1, 2, 3.

VC. 699.—Research and Master's Thesis. 0 to 6 credits.

VC. 799.—Research and Doctoral Dissertation. 1 to 12 credits.

VETERINARY SCIENCE

Instructional Staff 1956-57

Sanders, D. A., Emmel, M. W., Ristic, M., Simpson, C. F., Swanson, L. E., Dennis, W. R., Stone, W. M., Jr.

VY. 301.—Anatomy and Physiology. 3 hours. 3 credits. Offered 1.

The skeleton, articulations, muscles, circulatory, digestive, urinogenital, respiratory and nervous systems, endocrine glands, special senses.

VY. 303.—Introductory Economic Nematology. Identical with EY. 303, PT. 303, and SLS. 303. 2 hours, and 2 hours laboratory. 3 credits. Prerequisites: C-61 and BLY. 161, or BTY. 101-102. Offered 1. (For description see EY. 303.)

VY. 401.—Farm Sanitation and Disease Prevention. 3 hours. 3 credits. Offered 1.

Practical methods of farm sanitation, and control of principle diseases of farm animals.

VY. 402.—Poultry Diseases. 2 hours. 2 credits. Offered 2.

Causes, symptons, methods of prevention, and treatment of diseases of poultry.

COURSES FOR ADVANCED UNDERGRADUATES AND GRADUATES

VY. 545.—Problems in Animal Parasitology. 4 to 8 credits. Prerequisites: BLY. 161, 162, 208, 209 and BCY. 300. Offered 1, 2, 3.

Approved for graduate credit.

GRADUATE COURSE

VY. 643.—Problems in Animal Pathology. 4 to 8 credits. Prerequisites: Consult major professor. Offered 1, 2, 3.

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